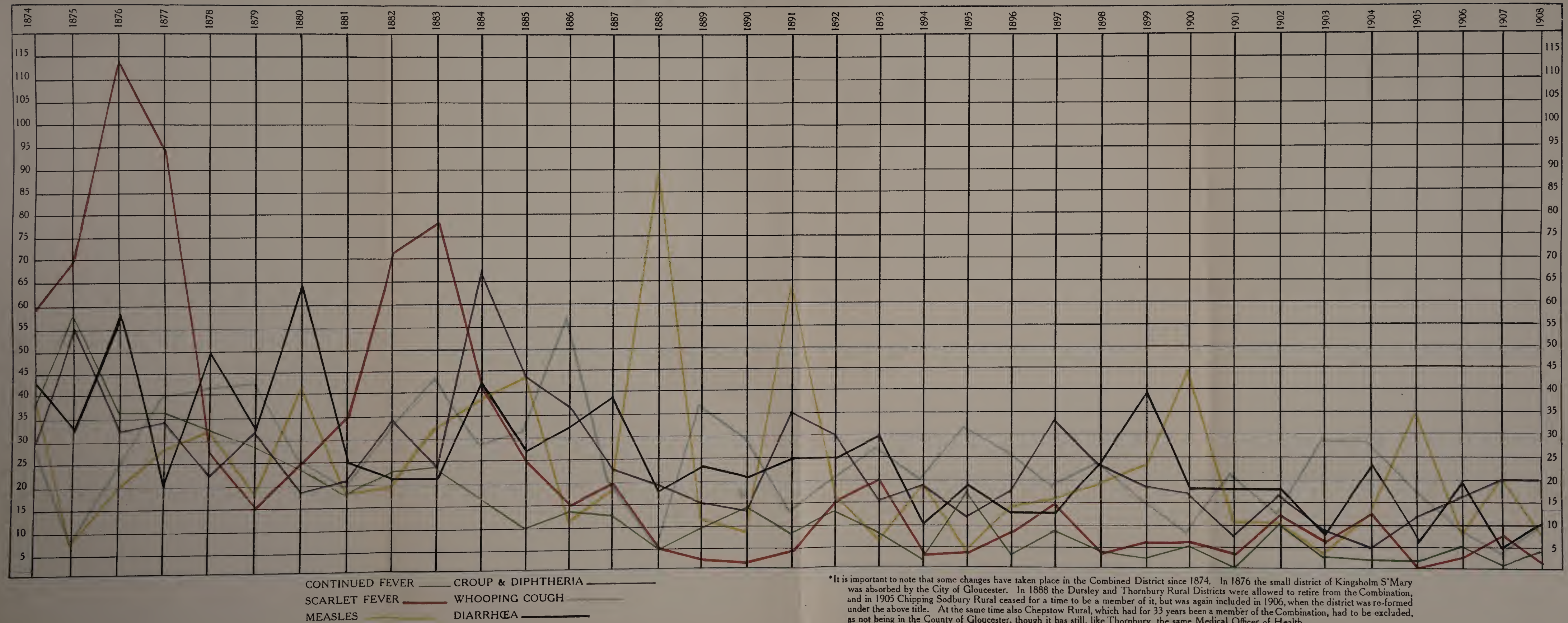


DIAGRAM SHOWING THE FLUCTUATIONS OF MORTALITY FROM THE MORE IMPORTANT EPIDEMIC DISEASES IN THE SOUTH WEST GLOUCESTERSHIRE COMBINED DISTRICT SINCE 1874. *



*It is important to note that some changes have taken place in the Combined District since 1874. In 1876 the small district of Kingsholm S'Mary was absorbed by the City of Gloucester. In 1888 the Dursley and Thornbury Rural Districts were allowed to retire from the Combination, and in 1905 Chipping Sodbury Rural ceased for a time to be a member of it, but was again included in 1906, when the district was re-formed under the above title. At the same time also Chepstow Rural, which had for 33 years been a member of the Combination, had to be excluded, as not being in the County of Gloucester, though it has still, like Thornbury, the same Medical Officer of Health.

THIRTY-SIXTH

ANNUAL REPORT

OF THE

Medical Officer of Health

FOR THE

SOUTH-WEST GLOUCESTERSHIRE

COMBINED

Sanitary District

FOR THE YEAR 1908.

Gloucester :
1909.

THE SOUTH-WEST GLOUCESTERSHIRE Combined Sanitary District

*Comprises the following Sanitary Authorities : **

RURAL : CHIPPING SODBURY, CIRENCESTER,
GLOUCESTER, LYDNEY, TETBURY
AND
EAST DEAN AND UNITED PARISHES.

URBAN : AWRE, CIRENCESTER, NEWNHAM,
TETBURY & WESTBURY-ON-SEVERN

Medical Officer of Health :

FRANCIS T. BOND, M.D., B.A. LOND., F.R.S.Ed.

RESIDENCE : GLOUCESTER

* The Thornbury Rural Sanitary District, which for fifteen years was included in the Combined District, is not so now, though it has the same Medical Officer of Health. The Report for this District is published separately. In 1906 the Combination, which had existed for 33 years as a voluntary combination and which had ceased to formally exist in consequence of circumstances which it is not necessary to explain, was re-formed by a special Act of Parliament and by a compulsory Order of the Local Government Board, of the same Authorities as formed the old Combined District, with the exception of Chepstow Rural, which, being in the county of Monmouth, could not be brought into the Order, but for which the same Medical Officer of Health continues to act in a separate capacity.

For the area, house accommodation and population of the Combined District as a whole and of its several constituent parts, see Table I. of the Appendix.

CORRIGENDA.

Page 70. Total ; for 41 read 44.
Bakehouses ; for 0 read 6.

TO THE JOINT COMMITTEE OF THE
URBAN AND RURAL DISTRICT COUNCILS
OF THE
South-West Gloucestershire Combined District.

GENTLEMEN,

I HAVE the honour to submit for your consideration my Annual Report for the year 1908, on the general sanitary condition of the Combined District for which I act as Medical Officer of Health, together with separate reports on each of the several districts forming the Combination, such report being the thirty-sixth which I have made since my first connection with the district.

AREA AND CHARACTER OF THE DISTRICT.

No change has taken place in the area of the district during the year.

The relative distribution of acreage, population and inhabited houses in the district, according to the census of 1901, is shown in the following table :—

		Acres.		Population.		Inhabited houses.		No. of Persons per house.
Gloucestershire	...	305,383	...	91,089	...	19,929	...	4·5
Wiltshire	...	3,271	...	356	...	77	...	4·62
Total	...	308,654	...	91,445	...	20,006	...	4·5

By way of information as to the salient physical features and social character of the district, for the benefit of those who are not familiar with them, I reproduce the statement of them with which I have prefaced my reports since the reconstitution of it in 1907, when the Chepstow Rural District was eliminated from it.

Its centre corresponds with the lower portion of the Severn Valley, bordered on the east by the escarpment and a portion of the plateau of the Cotswolds, and on the west by the high land of the Forest of Dean and the lower and eastern border of the river Wye.

Geologically it exhibits the outcrop of most of the beds from the upper Silurian formation, which is represented at May Hill on the west and Tortworth in the middle of the Severn vale, to the Oxford clay of the oolite formation, which appears near Fairford and Cirencester.

Ethnologically and archæologically it is characterised by abundant traces of the Roman occupation, in the shape of several of the great roads made during that period and of remains of public and private buildings then erected at Gloucester, Cirencester, Lydney, etc.

The main industry of the Combined District is agriculture, of which the production of milk is the leading feature. The bulk of this product goes to supply the cities of Bristol and Gloucester, but a good deal is sent to London and South Wales. The residue is devoted to butter-making and the feeding of calves, whilst only a comparatively small portion is now used for what was once the chief agricultural industry of the county, the making of cheese.

A good deal of fruit, especially plums, is grown on the Forest side of the Severn, and cider, which used to form the stock drink of the rural population, is still made, but in steadily decreasing quantity.

Apart from agriculture, the two small coal fields of Bristol and the Forest of Dean find occupation for a considerable colliery population, but there are no manufactures of any importance in the district, except that of tin plates at Lydney.

The population of the district as a whole in 1901 was 91,445, with 20,006 inhabited houses, giving an average occupation of 4·5 persons per house. It is difficult to give in figures any statement of the actual relations of this population at the two censuses of 1891 and 1901, as serious disturbances of it took place in connection with extensions of the cities of Bristol and Gloucester at the latter date,

but, in view of the fact that so large a portion of the district is agricultural in its character, and of the actual decline in population of several portions of it which were not affected by these extensions, there can be little doubt that, on the whole, the population has for some years past been a declining one.

BIRTHS AND THE BIRTH-RATE.

The total number of births registered during the year 1908 in the Combined District was 2122, and their relations to the estimated population of the two counties which the district covers and to the rate of England and Wales generally are shown in the subjoined table :—

		Estimated population.		Births.		Rate per 1000 population.
Gloucestershire	...	91,801	...	2,115	...	23·0
Wiltshire	...	323	...	7	...	21·6
England and Wales		—	...	—	..	26·5

The highest birth-rate in the Combined District was that for the district of East Dean and United Parishes, viz., 30·1, whilst the lowest was that for the Urban District of Awre. The rate for the whole of the District was 23·3, which is materially below that of the whole of England and Wales, viz., 26·5, but it compares favourably with that of 1907 for the Combined District, viz., 22·5, so that it may be hoped that the decline in the birth-rate which has been going on for some years has now reached its lowest point.

DEATHS AND THE DEATH-RATE.

The total number of deaths registered during 1908 in the Combined District, and the rates per thousand of the population, as well as the infantile mortality and its rate to the number of births registered, are shown in the following table :—

		Deaths.		Ratio per 1000 population.		Deaths under 1 year of age.		Ratio to births.
Gloucestershire	...	1,158	...	12·6	...	187	...	88
Wiltshire	...	2	...	6·1	...	0	...	0
England and Wales	...	—	...	14·7	...	—	...	121

The highest death-rate in the Combined District was that for the Urban district of Tetbury, viz., 20·2, whilst the lowest was that for the Newnham Urban district, 9·4.

The death-rate of the district as a whole was 12·6 for the year, and compares favourably with that of the rural and small urban populations of England and Wales, which was 14·7.

The infantile mortality for the year was 88, and is a little higher than that of 1907 (84), but considerably below that of rural England and Wales (121).

The fluctuations in these three rates during the last ten years are shown in the subjoined table :—

		Birth rate.		Death-rate.		Infant death-rate.
1899	...	26·9	...	14·6	...	118 per 1000 births
1900	...	26·4	...	14·4	...	112 „
1901	...	27·4	...	14·8	...	94 „
1902	...	25·7	...	15·2	...	101 „
1903	...	24·9	...	13·7	...	96 „
1904	...	24·2	...	13·5	...	94 „
1905	...	24·8	...	14·8	...	101 „
1906	...	22·4	...	13·0	...	78 „
1907	..	22·5	...	13·6	...	86 „
1908	...	23·3	...	12·5	...	88 „
Mean		24·8		14·0		96 „

GENERAL EPIDEMIC MORTALITY IN THE COMBINED DISTRICT IN 1908.

THE SEVEN ZYMOTIC DISEASES.

A birds-eye view of the relations of these diseases to one another, in the Combined District as a whole, during the past and the ten preceding years will be found in the following table, showing the relative mortality from each :

	1898	1899	1900	1901	1902	1903	1904	1905	1906	1907	Mean	1908
Small-pox	0 ..	0 ..	1 ..	0 ..	0 ..	0 ..	0 ..	0 ..	0 ..	0 ..	0·1 ..	0
Scarlet Fever	4 ..	5 ..	5 ..	4 ..	11 ..	5 ..	8 ..	0 ..	2 ..	8 ..	5·2 ..	2
Croup and Diphtheria	21 ..	15 ..	15 ..	6 ..	15 ..	7 ..	6 ..	13 ..	16 ..	20 ..	13·4 ..	20
Continued Fever	5 ..	3 ..	5 ..	2 ..	8 ..	2 ..	3 ..	2 ..	5 ..	1 ..	3·6 ..	4
Measles	15 ..	19 ..	40 ..	6 ..	7 ..	2 ..	9 ..	27 ..	8 ..	19 ..	15·2 ..	7
Whooping Cough	21 ..	12 ..	6 ..	20 ..	11 ..	28 ..	26 ..	13 ..	9 ..	4 ..	15·0 ..	9
Diarrhoea	19 ..	37 ..	15 ..	19 ..	14 ..	7 ..	24 ..	5 ..	20 ..	5 ..	16·5 ..	10
Total	85 ..	91 ..	87 ..	57 ..	66 ..	51 ..	76 ..	60 ..	62 ..	57 ..	69·2 ..	52

It will be seen from this table that the fatality of the forms of infectious disease which are the main causes of infectious mortality, has been less than it was even in 1907, and is only one in excess of the low water mark of 1903. Measles and Whooping Cough, which are the chief contributories to this source of mortality, have been both of them considerably below the average for the previous decennium. The only one of the seven so-called "Zymotic" diseases, the mortality of which has been in excess of the average, is Diphtheria.

It will also be seen that the mortality from this type of disease has been steadily increasing since 1903, though the table also shows that there was an almost uninterrupted decrease in this mortality from 1898, and, indeed, if we start with 1897, when the deaths from Diphtheria were 32, the gradient of decrease was a more marked one still. I shall have more to say on this subject later on, in connection with this disease as a special source of mortality, and only now refer to it in passing as an important feature of the above table and as offering, with Measles and Whooping Cough, obvious evidence of the cyclical type of prevalence which is so characteristic of all of these zymotic diseases.

GENERAL PREVALENCE OF NOTIFIABLE DISEASE.

The number of notifications of infectious disease during the year and its relations to the several notifiable diseases and to the comparative numbers for the ten preceding years are given in the following table :—

Year	Notifi- cations	Small- pox	DISEASES.					Ery- sipelas	Removed	
			Scarlet Fever	Croup and Diphtheria	Enteric Fever	Puerperal Fever	to Hosp'l		per cent	
1898	354	0	218	79	21	8	28	27	7.6	
1899	674	0	319	229	17	11	98	31	4.6	
1900	544	0	313	133	15	12	71	79	14.5	
1901	406	0	267	50	17	5	67	49	12.0	
1902	835	1	533	185	17	9	90	158	18.9	
1903	555	3	305	156	34	5	52	82	14.7	
1904	375	0	245	83	6	4	37	63	16.8	
1905	321	0	118	157	15	4	27	71	32.1	
1906	434	0	94	270	14	8	48	82	18.8	
1907	607	0	376	180	13	7	31	115	18.9	
Annual										
Mean	510	.4	278	152	16	7	54	75	15.8	
1908	370	0	168	147	26	2	27	61	16.5	

The facts exhibited in the foregoing table are generally analogous to those shown in the preceding one except that instead of showing the mortality of the seven chief sources of infectious mortality they deal only with the prevalence of those forms of infectious disease which are notifiable by statute, and that the table shows the number of such cases removed to an isolation hospital in the various portions of the whole district.

Here again, the total number of notifications received during the year 1908 is considerably below the mean of the ten previous years, as is the case also in that of each of the contributory diseases except Enteric Fever. The explanation of this latter excess will be given in dealing with the special incidence of this disease later on.

The actual number of cases removed to hospital is a little below the mean of the previous ten years, but in regard to the percentage, *i.e.* in comparison with the numbers of cases notified, the removals for the year are a little above the average.

PREVALENCE DURING THE YEAR 1908 OF PARTICULAR TYPES OF INFECTIOUS DISEASE.

SMALL-POX has been absent during the past year from the whole of the Combined District. Its absence from the southern part of it, in the neighbourhood of Bristol, which, like all large centres of population, is very liable to spread the disease into surrounding districts, may be due to the fact that there was only one case of the disease in that city during the year. The total of deaths from Small-pox in England and Wales during 1908 was twelve.

As the preparedness to meet an outbreak of Small-pox is largely dependent on the efficiency with which infant vaccination is maintained. I think it well to reproduce the following statistics showing the progress of infant vaccination

in different portions of the Combined District in 1907 (the last year for which complete figures are at present attainable) and the eight previous years. To these tables of local statistics I have appended the corresponding figures for the whole of England and Wales for 1906, the last year for which they are at present obtainable.

POOR LAW AND SANITARY DISTRICT.	Births Registered	Successfully Vaccinated	Per cent. of Births	Exemption Certificates	Dead Unvaccinated	Insusceptible or Postponed	Left District or not Accounted for
CHIPPING SODBURY UNION (Rural District)	1898...462...281...	60...	8...43...	19...111			
	1899...461...325...	70...	2...47...	10... 48			
	...1900...463...321...	69...	17...41...	14... 70			
	1901...516...360...	69...	12...49...	3... 92			
	1902...455...349...	76...	8...43...	6... 49			
	1903...462...398	86...	13...26...	4... 21			
	1904...444...380...	85...	9...27...	9... 15*			
	1905...493...421...	85...	14...30...	5... 23			
	1906...524...429...	82...	20...30...	10... 35			
	1907...491...401...	81...	27...24...	6... 33			
CIRENCESTER UNION (Rural and Urban Districts)	1898...482...373...	77...	33...37...	14... 25			
	1899...456...367...	69...	17...45...	16... 11			
	...1900...445...379...	85...	11...38...	8... 9			
	1901...477...408	85...	28...37...	5... 9			
	1902...448...384...	85...	13...34...	6... 11			
	1903...449...375...	84...	23...37...	2... 12			
	1904...462...387...	83...	24...35...	6... 10			
	1905...465...370...	80...	31...38...	14... 12			
	1906...418...351...	84...	26...19...	10... 12			
	1907...403...313...	77...	54...34...	3... 9			
GLOUCESTER (Rural District only)	1898...289...102...	35...	66...37...	5... 77			
	...1899...312...172...	55...	32...30...	10... 68			
	1900...296...172...	59...	46...25...	4... 49			
	1901...311...179...	57...	54...38...	13... 27			
	1902...215...132...	61...	50...14...	7... 12			
	1903...218...114...	52...	58...10...	22... 14			
	1904...216...139...	64...	41...12...	12... 12			
	1905...261...145...	52...	77...15...	9... 15			
	1906...217...129...	59...	54...12...	8... 14			
	1907...225...110...	49...	76...17...	14... 8			
LYDNEY (Rural District)	1898...256...156...	60...	63...18...	4... 15			
	1899...244...135...	55...	39...30...	6... 34			
	1900...236...145...	61...	34...20...	8... 29			
	1901...261...148...	56...	56...15...	7... 35			
	1902...277...181...	65...	63...22...	2... 9			
	1903...113... 77...	68...	30... 5...	0... 1			
	1904...233...147...	63...	53...21...	1... 11			
	1905...254...171...	61...	61...14...	1... 7			
	1906...233...148...	62...	59...16...	6... 4			
	1907...213...146...	68...	53...10...	2... 2			

* These numbers only account for 440 births; but they are what were supplied to me for the year when I was not connected with the district.—F.T.B.

POOR LAW AND SANITARY DISTRICT			Births Registered	Successfully Vaccinated	Per cent. of Births	Exemption Certificates	Dead Unvaccinated	Insusceptible or Postponed	Left District or not Accounted for
TETBURY	1898...	169...	72...	42...	34...	15...	4...	44	
(Rural and Urban	1899...	137...	97...	70...	18...	11...	5...	6	
Districts)	1900...	144...100...	69...	24...	12...	1...	7		
	1901...	130...	98...	75...	19..	7...	1...	5	
	1902...	147...108...	71...	24...	13...	0...	2		
	1903...	146...103...	70...	26...	10...	0	7		
	1904...	147...100...	79...	26...	11...	1...	9		
	1905...	137...	98...	71...	29...	7...	1...	2	
	1906...	143...	97...	67...	34...	10...	0...	2	
	1907...	137...	85	62...	34...	12...	4...	2	
WESTBURY-ON-	1898...	680...224...	33...	303...	58...	26...	69		
SEVERN UNION	1899...	680...316...	46...	184...	59...	38...	83		
(East Dean and United	1900...	720...314...	43...	379...	54...	5...	68		
Parishes Rural and	1901..	706 . 330 ..	42..	314	.51..	3 ..	8		
Awre, Newnham, and	1902...	654...317...	48...	275...	46...	7...	9		
Westbury-on-Severn	1903...	647...322...	50...	255...	46...	4...	20		
Urban Districts)	1904...	602...298...	49...	254...	35...	3...	11		
	1905...	581...286...	49	242...	39...	3 ..	11		
	1906...	611...287...	47...	275...	35...	5...	9		
	1907...	588...240...	40...	291...	47...	1...	9		

ENGLAND AND WALES (1906).

Births Registered	...	...	...	...	935,338
Successfully Vaccinated	...	...	...	...	686,992
Per Cent. of Births	...	...	...	...	73
Exemption Certificates	...	...	...	...	53,828
Dead Unvaccinated	...	...	...	..	88,553
Insusceptible or Postponed	...	...	...	...	17,079
Unaccounted for	...	...	...	...	89,380

With reference to these latter figures it will be observed that it is only the Chipping Sodbury and Cirencester districts that show a higher percentage of successful vaccination than the average of the whole country.

The exemptions granted in the country generally have varied from 3·6 per cent. of the total births in the years 1899 and 1902 to 5·8 per cent. in 1906, which is the highest number in the eight years, 1898-1906. The following are

the corresponding percentages in the Combined District : Chipping Sodbury 5, Cirencester 13, Tetbury 24, Lydney and Gloucester Rural 33, Westbury-on-Severn 49.

It is interesting to note that the percentage of infant vaccinations to births in the country as a whole has increased steadily from 61 in 1898 to 75 in 1903, 1904, and 1905, in which latter year it was 75·8. In 1906 it fell off again to 73·4.

It is a curious comment on the large number of 2,203 children returned as “insusceptible” in England and Wales in 1906 that Dr. Leslie Thorne Thorne, a Medical Inspector of the Local Government Board, states in his report on the Animal Vaccine Station in Lambs Conduit Street, London, now closed, that during the whole period of its existence, 27 years, in which 125,566 consecutive primary vaccinations were performed, a case of insusceptibility has never been met with. From which it is evident that “insusceptibility” in the legal sense, viz., failure to vaccinate a child after three attempts have been made to obtain a successful result, must be such a rare event as to be inconsiderable, where the operation is performed by a competent operator and with reliable lymph. But it is only fair to point out that most of these cases of alleged “insusceptibility” were probably cases occurring in private medical practice, and that the conditions under which vaccination has to be performed by vaccinators in private practice, who are dependent upon unofficial preserved lymph, are less favourable for obtaining successful results than those under which the operation was performed in the National Vaccine establishment, with lymph obtained direct from the calf.

SCARLATINA.—The following table gives the number of cases of Scarlatina notified in the Combined District during the year 1908, compared with those of the previous ten years, also the number of deaths and the relative *fatality* of the disease, *i.e.*, the ratio of deaths to cases :—

Year	Cases notified				Deaths			Fatality per cent.	
1898	..	...	218	...	...	4	...	...	1·8
1899	...	...	319	...	...	5	...	...	1·5
1900	...	...	313	...	...	5	...	...	1·6
1901	...	...	267	...	...	4	...	...	1·5
1902	...	..	533	...	...	11	...	...	2·0
1903	...	...	305	...	...	5	...	...	1·6
1904	...	...	245	...	...	8	...	...	3·2
1905	...	...	118	...	...	0	...	...	0·0
1906	...	..	94	...	...	2	...	...	2·1
1907	...	...	376	..	...	8	...	...	2·1
Annual Mean			278			5			1·7
1908	...	...	168	...	...	2	...	...	1·2

It will be seen from the table that the unusual prevalence which Searlatina exhibited in 1907 has considerably subsided, both the number of cases notified and the fatality being much lower than in that year.

It is also noteworthy that the high prevalence of the disease in 1907 immediately followed a year of exceptionally low prevalence. If it had not been for this unusual exception the mean would have been nearly 300, and the contrast of the decline during 1908 still more marked.

The only districts which were absolutely free from the disease were Awre Urban and the Wiltshire portion of Tetbury Rural. It was most prevalent in East Dean and Chipping Sodbury districts, the latter being the one in which the disease was also most prevalent in 1907. This is largely due in the latter case to the constant intercourse between the Chipping Sodbury district and the City of Bristol, from which Scarlet Fever is never absent, and in both of these districts to the generally mild type of the disease, which greatly facilitates the diffusion of its infection.

DIPHTHERIA.—Here again the prevalence of the disease has diminished, when compared with 1907, but its fatality has risen. On looking at the special table in the Appendix illustrating the variations of Diphtheria in the different portions of the Combined District, it will be seen that during

the last eleven years the districts of East Dean and United Parishes, Westbury-on-Severn and Lydney exhibit a marked pre-eminence in the number of cases notified.

So far as Westbury is concerned, its high position in the scale of prevalence during the above period is due to an outbreak of the disease which took place in the year 1900 amongst the children in the Union Workhouse there.

In order to throw some light on this matter I may cite the following figures: The number of children of the school age (5 to 15 years) in the whole of England and Wales at the present time is approximately 21 per cent. of the entire population. In the Rural District of East Dean and United Parishes it is more than 25 per cent. of the population of the district, whilst in the Lydney Rural District it is a little more than 13 per cent. of the population of the District. But these numbers have to be read in the light of the facts that the population of the township of East Dean itself, in which by far the larger number of cases of Diphtheria have been notified, represents 72 per cent. of the whole population of the entire district of East Dean and United Parishes, whilst the population of the parish of Lydney, in which also the great bulk of the cases of Diphtheria have occurred, represents 41 per cent. of the whole population of the Lydney Rural district.

It is evident, therefore, that the proportion of children of the school age in these two special districts is much larger than it is in other parts of the larger districts in which they are situated. Greater numbers of children mean greater pressure on school accommodation, and this latter in its turn means increased facilities for the diffusion of the infection of Diphtheria in schools when it once finds its way into them.

As the pressure on school accommodation, which has of late years existed in both these districts, is being diminished

by the erection of new and better ventilated schools, we may look forward with confidence to the prevalence not only of Diphtheria, but of other infections which are diffused by personal contact and atmospheric contamination, being also steadily diminished. For my own part, I feel sure that if school work were carried on as largely as possible in the open air, not only would this result be achieved but the general health of the children and their powers of resistance to other forms of disease would be materially improved. The dust of schoolrooms is a very favourable medium for the diffusion of infections, which freely harbour in it, and the process of dry sweeping which is still practised in many schools, notwithstanding every effort to supersede it by spraying the floors with an appropriate liquid disinfectant, promotes this way of spreading disease.

There are two methods of dealing with an outbreak of Diphtheria when it has established itself in a locality and its diffusion through any particular schools can be clearly indicated. One is to close these schools and thus get rid for a time of the medium by which the infection is diffused. This is, of course, the easiest method and it is the one which generally commends itself, for financial reasons especially, to the managers of schools. But there are two difficulties at least in the way of adopting this course. One is that of deciding for how long a school should remain closed. If it were not for the peculiar persistence of the Diphtheritic infection in the throats and noses of some children this difficulty would not be a serious one.

The other obstacle is, that though it is not difficult to obtain the closure of an elementary day school which can be shown to be acting as a centre for the diffusion of any special infection, it is not so easy to secure the closure of Sunday Schools, especially in places like East Dean and Lydney, where each sect has its own Sunday School and

there is a lively competition between them for scholars. In such a locality there is little use in closing a day school when one is pretty sure that all the children attending it will be mixing freely with one another on Sundays.

The true remedy is to ascertain by means of a bacteriological examination of a sufficient number of the children of the infected school to what extent the infection really prevails amongst them; to exclude those children from school and to place them under appropriate medication until they fail to exhibit any bacteriological evidence of the characteristic organism of Diphtheria, after not less than two examinations; and on the occurrence of any fresh case in connection with the infected school to repeat this procedure until the infection is stamped out.

But this course, which is not free from difficulty in a large urban centre, with a staff and other resources available for the performance of this special work, is impracticable, or, at any rate, only practicable to a very limited extent, in rural and small urban areas where neither the staff nor the resources in other respects are adequate even for the ordinary routine work of the district, especially in the face of the pressure that is constantly exercised by the School Attendance Officer to compel every child to attend school whose absence cannot be explained on the ground of illness by a formal medical certificate.

In this matter the interests of the Education and Sanitary Authorities are at present distinctly antagonistic, and it is not easy, from a practical point of view, to reconcile them except by a consolidation of responsibility which does not now exist.

As the figures indicating the prevalence and fatality of Diphtheria in the Combined District as a whole and in the various constituent parts of it are given in Table IV. of the Appendix, I have not thought it necessary to give

the decennial summary of them in this part of the Report, as I have done in the case of other infectious diseases.

ENTERIC AND OTHER FORMS OF CONTINUED FEVER.

The statistics of this group of diseases in the Combined District during the past year will be found in the following table :—

Year	Cases notified				Deaths				Fatality per cent
1898	...	...	21	...	...	5	...	...	23·8
1899	...	...	17	..	...	3	...	...	17·6
1900	...	...	15	...	...	5	...	...	33·3
1901	...	...	17	...	...	2	...	...	11·7
1902	...	...	17	...	...	8	...	...	47·0
1903	...	...	34	...	...	2	...	...	6·0
1904	...	...	6	...	...	3	...	...	50·0
1905	...	...	15	..	...	2	...	..	13·3
1906	...	...	14	...	...	5	...	...	35·7
1907	...	...	13	...	...	1	...	...	7·7
Annual Mean			16			3			24·6
1908	...	...	26	...	..	4	...	...	15·3

The number of cases of the Enteric type of fever notified in the Combined District during the year 1908 was just double what it was in 1907, and considerably above the average of the previous ten years. On reference to Table III. in the Appendix it will be seen that the Cirencester portion of the district contributed 15 out of the 26 cases notified, of which 12 were in the Cirencester Urban District, whilst six of the remainder, in the Gloucester Rural district, were all in a single public institution. With this latter exception the cases were either sporadic in character or confined to very limited outbreaks, which will be dealt with in the reports of the districts in which they occurred.

PUERPERAL FEVER.—The number of cases of this disease notified during the year 1908 was considerably below the average of the previous ten years, being only two; one of them in the Lydney Rural District and the other in that

of East Dean. The former did not appear to be due to any ordinary insanitary conditions, and the latter, which was fatal, was not strictly a case of Puerperal Fever, but of Puerperal Septicæmia, complicated with Phthisis, in which death occurred three months after confinement. The comparative statistics of the disease during the last 11 years are given in the following table :—

Year	Cases notified			Mortality			Fatality
1898	...	...	8	...	...	6	75·0
1899	...	...	11	...	...	5	45·4
1900	...	...	12	...	...	10	83·3
1901	...	...	5	...	...	5	100·0
1902	...	...	9	...	...	7	77·7
1903	...	...	5	...	...	4	80·0
1904	...	...	4	...	...	1	25·0
1905	...	...	4	...	...	3	75·0
1906	...	...	8	...	...	6	75·0
1907	...	...	7	...	...	2	28·5
Annual Mean			7				66·4
1908	...	...	2	...	...	1	50·0

ERYSIPELAS.—For the third year in succession there has been no fatal case of uncomplicated Erysipelas in the Combined District, and the number of cases notified is considerably below the average of the previous ten years, as will be seen from the following table :—

Year	Cases notified			Deaths			Fatality
1898	...	...	28	...	...	1	3·6
1899	...	...	98	...	...	3	3·0
1900	...	...	71	...	...	3	4·2
1901	...	...	67	...	...	1	1·5
1902	...	...	90	...	...	1	1·1
1903	...	...	52	...	...	4	8·0
1904	...	...	37	...	...	5	13·5
1905	...	...	27	...	...	2	7·4
1906	...	...	48	...	...	0	0·0
1907	...	...	31	...	...	0	0·0
Annual Mean			55				4·2
1908	...	...	23	...	...	0	0

NON-NOTIFIABLE INFECTIOUS DISEASES.

The diseases which I have grouped under this designation, because, although infectious in a greater or lesser degree and dependent for this characteristic on a specific, communicable germ, they are not compulsorily notifiable, are five in number.

Two of them, Measles and Whooping Cough, both of them essentially diseases of childhood, are cyclical in their character, visiting every locality at some time or other and attacking, with few exceptions, all children who have not acquired immunity through a previous attack. In both diseases also the infection is of a highly diffusible character, is communicable at an early stage of the attack and is mainly spread through school influence. As there is no possibility of learning the number of children attacked in any outbreak of them it is difficult to estimate the fatality of either of these diseases, but it is unquestionably high, much higher than it should be if the affected children were treated with more care than they generally are, and higher also than that of some other infectious diseases which excite more anxiety amongst the public.

In both of them the mortality is much greater in the earlier years of childhood than it is later on, so that there is every reason to make such effort as is practicable to arrest the progress of the infection as well as to secure the proper treatment of those children who are attacked.

There has been much discussion as to the value of closing schools as a means of arresting outbreaks of Measles and Whooping Cough, but it is very doubtful whether this step is of much use, except in purely rural districts, and then only when the school is closed promptly on the occurrence of the first cases. As a matter of fact the Medical Officer of Health often does not, as a rule, hear of the prevalence of these diseases in a locality until it is too late to close the school as a measure of precaution or until the attendance has been so reduced that the Managers have closed it for financial reasons.

In previous Annual Reports I have drawn attention to the valuable assistance which a trained and intelligent woman can render in helping to diminish the mortality of

these as well as of other diseases of childhood, and it is encouraging to see the progress which is being steadily made, especially in the larger centres of population, in the recognition of the value of this method of dealing with them.

The following tables show the prevalence of Measles and Whooping Cough in the Combined District during 1908 and the ten previous years, so far as it can be estimated by the mortality which they have caused :—

MEASLES.

Year			Mortality		Per 1000 population
			Gross		
1898	...	...	15	...	0·17
1899	...	..	19	...	0·21
1900	...	...	40	...	0·45
1901	...	...	6	...	0·06
1902	...	...	7	...	0·08
1903	...	...	28	...	0·02
1904	...	...	9	...	0·10
1905	...	...	27	...	0·38
1906	..	...	8	...	0·09
1907	...	...	19	...	0·20
Annual Mean			17		0·17
1908	...	...	7	...	0·7

WHOOPING COUGH.

Year			Mortality		Per 1000 population
			Gross		
1898	...	...	21	...	0·23
1899	...	...	12	...	0·13
1900	...	...	6	...	0·06
1901	...	...	20	...	0·22
1902	...	...	11	...	0·12
1903	...	..	28	...	0·32
1904	...	...	26	...	0·30
1905	.	...	13	...	0·18
1906	...	...	9	...	0·10
1907	...	...	4	..	0·04
Annual Mean			15		0·17
1908	...	...	9	...	0·09

PHTHISIS AND OTHER TUBERCULAR DISEASES.

In the following table will be found the record of the mortality from Phthisis and from other Tubercular diseases in 1908, compared in the first of these forms of Tubercular affection with the mean of the previous ten years, and, in the other, with that of the previous seven years :—

Year	Mortality.					Total	
	Phthisis		Other Tubercular Diseases				
1898	...	...	84	...	—	...	—
1899	...	...	128	...	—	...	—
1900	...	...	116	..	—	...	—
1901	...	...	86	...	30	...	116
1902	...	...	53	...	27	..	80
1903	...	...	63	...	30	...	93
1904	...	...	55	...	31	...	86
1905	...	..	61	...	18	...	79
1906	...	...	74	...	25	...	99
1907	...	...	58	..	17	...	75
			—		—		—
	Mean 10 years		77	..	—	...	—
	„ 7 years		—	...	18	...	62
1908	...	...	66	...	23	...	89

It will be seen that, though the mortality from the pulmonary form of Tubercular disease (Consumption of the Lungs) fluctuates a good deal, there is evidence that on the whole it is declining. And though it is too much to hope, as some sanguine writers for the Press would have the public to expect, that Consumption will ever be entirely eradicated from our British social soil, there is good ground for hoping that the general attention which is now being directed to the prevention and treatment of the disease will produce such a gradual reduction of the mortality from it as has been effected in the case of some other infectious diseases, such as Enteric and Scarlet Fevers.

In my last Annual Report I gave some substantial evidence that the Combined District compares favourably in regard to the prevalence of Phthisis with the country as a whole, as well as with the Administrative County of Gloucester and with some of the Welsh counties with which it was possible to collate it. It would be straining the comparison unjustifiably to assume that this favourable aspect is due to any special organised efforts made in connection with this district to arrest the progress of this widely diffused infection. The period covered by the above table, as well as the numbers themselves, are both of them

too small to do more than serve as a rough indication that, so far as mortality in connection with a disease is a criterion of its prevalence, the conditions which control the prevalence of Phthisis in this district are at least as favourable to its reduction as they are in other parts of the Kingdom.

I am glad to be able to report that the Winsley Sanatorium for the alleviation of Phthisis is gradually emerging from the financial difficulties which oppressed it in its earlier years and is exercising a beneficial influence on the arrest of this disease in the district over which its operations extend. The only Councils in the Combined District which contribute to its maintenance are still those of Cirencester Urban and Rural Districts

ANOMALOUS GERM DISEASES.

I have brought under this head three sources of mortality, Diarrhœa, Influenza and Cancer, which it is difficult to group under any other designation. Two of them at least are due to specific infections, and though the various forms of malignant disease which are included under the vague term Cancer seem to be more identified with perversions of nutrition in certain organs and tissues of the body than with specific infection, there is sufficient evidence of the infectious character, under favourable conditions, of some of them, to justify the assumption that they are caused by specific germs and are, therefore, communicable.

DIARRHŒA as a cause of mortality is mainly limited to the very young and the very old. This is shown by the ten deaths registered under this head in the Combined District during 1908. Eight of them were under three years of age and two over 65. Of the four registered in the Gloucester Rural district and the two in East Dean, all were under one year.

The following table gives the mortality from this cause in the Combined District during the last eleven years. It will be observed that the fluctuations are considerable, and, as I stated in my Report for 1907, it is not easy to explain those of the latter portion of the period :—

Year.		Mortality.	Year.		Mortality.
1898	...	19	1905	...	5
1899	...	27	1906	..	20
1900	...	15	1907	...	6
1901	...	19			—
1902	...	12	Annual mean		15
1903	..	7			—
1904	...	23	1908	...	10

It will be seen from the above table that 1908 compares favourably in regard to the mortality from Diarrhœa with the average of the previous ten years.

INFLUENZA.—The following table exhibits the mortality registered under the head of Influenza in 1908, which was identical with the mean of the previous ten years :—

Year.		Mortality.	Year.		Mortality.
1898	...	45	1905	...	27
1899	...	81	1906	...	21
1900	...	47	1907	...	39
1901	...	7			—
1902	...	19	Annual Mean		31
1903	...	17			—
1904	...	15	1908	...	31

Of the above 31 deaths, of which eight occurred in the Cirencester Urban district, seven in that of Lydney and six each in those of East Dean and Chipping Sodbury, 18 were over 65 years of age and three were under one year.

CANCER.—Of the various forms of malignant disease there were 89 deaths during 1908. Of these, 43 were under 65 years of age and 46 over. The larger number of them occurred in the agricultural districts, *e.g.*, 25 in the Chipping Sodbury district, 28 in those of Cirencester Urban and Rural, 14 in East Dean and 13 in Gloucester Rural. This aggregate mortality is considerably in excess of the average for the

previous ten years (71) and also beyond that of any single year in the decennial period ; and if it have any special significance, which only further observation can show, it would appear to justify the assumption, so often made, that Cancer is not only absolutely on the increase, as might be expected from the increase of population and the gradual extension of life, but also relatively to other diseases.

The following table shows the mortality from malignant disease in the Combined District in 1908 compared with the ten preceding years :—

Year.		Mortality.	Year.		Mortality.
1898	...	65	1905	...	72
1899	...	71	1906	...	75
1900	...	80	1907	...	72
1901	...	72			—
1902	...	66	Annual mean		71
1903	...	60			—
1904	...	81	1908	...	89

ARREST OF INFECTIOUS DISEASE.

The only noteworthy evidence of progress during the past year in the provisions available in the Combined District, as a whole, for the arrest of infectious disease is that of the removal and reconstruction of the Isolation Hospital at Greenway, in the Forest of Dean. Some delay has occurred in effecting this result, to which I referred in my last Annual Report, in consequence of doubts having been raised as to the legal ownership of the original building and as to whether it belonged to the Guardians of the Westbury Union, or to the Rural District of East Dean and United Parishes alone, or whether the Urban Districts of Awre, Newnham, and Westbury-on-Severn, which, with the Rural District of East Dean, form the Westbury-on-Severn Poor Law Union, had any claim to the use of it.

The question has, I believe, now been settled in favour of the East Dean Rural District Council being entitled to the sole ownership of the structure, and the completion of

the reconstruction of the old hospital is being pushed on and will be shortly completed.

Whilst this reconstruction will have the advantage of locating the hospital on ground which is the freehold of the District Council, instead of on land which was held by uncertain tenure under the Crown, as was previously the case, and of much improving the facilities for administrative work by connecting the hospital building with an existing house, which is well adapted for the purpose, the actual resources of the hospital in the way of beds will not be much increased, but the accommodation for nurses, which has hitherto been very unsatisfactory, will now be very much improved in the reconstructed building. The accommodation for patients will consist of two wards, each holding 12 beds and arranged end to end, with a block of four small rooms between them, consisting of a caretaker's bedroom, sitting room, kitchen and scullery. This latter block represents the bare minimum of accommodation on which it has been possible to work the hospital at all, and that only when the patients have been children or adults requiring no special nursing. The limited nature of this accommodation has been the cause of much trouble whenever cases of a serious nature, which required the care of a trained nurse, were sent into the hospital. Now, in addition to this small administrative block, there is a substantial house, with sitting room, kitchen, three bedrooms, and some additional accommodation. There is also a separate building for use as a mortuary.

It is only right to state here that the acquisition of this important addition to the sanitary resources of the East Dean Rural district is largely due to the persistent efforts of the Chairman of the Council, Mr. G. ROWLINSON, who has been well seconded in the constructive arrangements of the work by Mr. W. WHITEHOUSE, the Surveyor to the Council.

Whilst in picturesqueness the site of the hospital may compare with that of any with which I am acquainted, it has two disadvantages. One is that it is close to a main road. Theoretically this is a more serious objection than it is practically, since the public are not much disposed, as a rule, to come into near relations with isolation hospitals and the nearness to the road, which is patrolled by the police, provides a desirable control to those who might be inclined to intrude upon it.

A more serious disadvantage is the distance which the hospital is from its administrative centre at Cinderford and from the medical officer in charge of it, who lives at Mitcheldean, both a good two miles distant. In view of serious emergencies, which may possibly occur at any moment, requiring immediate assistance, it is very desirable that a means of communication should be provided with one or other of these places, either by telephone or by the retention of the services of a man who could be available for this as well as other requirements.

The appropriation of this hospital for the purposes of the East Dean Rural district tends to accentuate the resourceless condition in this matter of the three other small urban districts which, with it, make up the Westbury-on-Severn Poor Law Union, viz., Awre, Newnham, and Westbury-on-Severn.

There has been some talk at different times of these three districts combining to form a joint authority for the purpose of providing an isolation hospital for their own requirements, which are certainly not large in this respect. But, irrespective of the difficulty of finding a site that would be considered generally convenient, and still more so of discovering any existing building which would be appropriate for the object in view, the cost of erecting and maintaining such an institution in an efficient condition

would be a serious charge upon the comparatively small rateable value of these districts.

It would be much more economical for them and be more likely to meet properly the requirements of the public health, if they would make terms with the East Dean Rural Council to admit into the Greenway hospital any patients from these districts on equitable terms, or to form, with that body, a joint hospital board for the purpose of utilising that hospital for the whole of the four districts.

But past experience in this matter does not afford much hope of either of these courses being adopted unless the County Council see the necessity of exercising the powers which they possess for promoting such combinations.

The only other portions of the Combined District which are unprovided with any means of isolating infectious disease are the Tetbury Rural and Urban districts. The population of these districts, like that of the three Severn side ones just referred to, is so small and, in the case of the Rural district, so sparse, that even if they were combined, which there would probably be no difficulty in doing, a comparatively small hospital would answer their requirements. But here, again, the cost of providing and maintaining even the smallest hospital that could be considered efficient would be large in proportion to their rateable value, unless the principle of combination could be carried further by union of these two districts with adjoining ones. The most practicable step in this direction would be a combination with the Malmesbury Urban and Rural districts, which are within a convenient distance and should have as much to gain, in the way both of efficiency and economy, by combination with those of Tetbury as the latter would, on their part, benefit by such an arrangement. But if it cannot be promoted by the voluntary co-operation of these four districts, in their own financial and sanitary interests,

it does not seem open to promotion in any other way, as the districts, though so near one another, are in two different Counties and cannot, apparently, be dealt with under the powers of the Isolation Hospitals Act, 1901.

In my last Annual Report I stated that the Committee of the Cirencester Joint Isolation Hospital had had under consideration plans for its enlargement; but no further action in the matter has since been taken.

The arrangement between the Gloucester Rural and Urban Authorities for the reception of cases from the Rural district into the Urban isolation hospital at Over still continues and use has been made of it in five cases during the past year.

The Cirencester Authorities are still the only ones in the Combined District who possess any appliance of any sort for the disinfection of clothes and bedding by heat.

Further details respecting the employment and the cost of maintenance of the several hospitals above referred to will be found in the special reports on the districts in which they are situated.

SEWERAGE AND SEWAGE DISPOSAL.

No works of any importance in connection with sewerage or sewage disposal have been either carried out or considered in the Combined District during the past year, except the scheme for the drainage of Filton, in the Chipping Sodbury Rural district, to which I referred in my last Annual Report. This scheme, the necessity for which has been shown at a local enquiry by the Local Government Board, is still under discussion in regard to some of its details, but promises soon to take a definite shape.

WATER SUPPLY.

No new works of any importance connected with the extension or improvement of water supply have been undertaken during the past year. There has been some

delay in developing the large addition to the water supply of Cinderford which was found to be available in 1907, but active measures for this purpose are now being taken.

The West Gloucestershire Water Company have made some extensions in the Chipping Sodbury district during the year, and some improvement has been made in the works for the supply of water to the village of Coates, in the Cirencester Rural district, at a cost of about £170.

The long standing question of the supply of the Netherend portion of the parish of Woolaston, in the Lydney Rural district, has been frequently considered during the year by both the District and Parish Councils and there is every prospect of a scheme for meeting this much needed requirement being shortly put in hand.

A small population in the Forest of Dean, at a point about $1\frac{1}{2}$ mile from the village of Blakeney, where the three Rural districts of East Dean, West Dean, and Lydney meet, is badly off for water, but the cost of providing a supply would be considerable and the East Dean Council, in whose district it chiefly lies, have not been able yet to see how to meet this requirement.

WORK UNDER SPECIAL ACTS.

HOUSING OF THE WORKING CLASSES.—As has been the case in previous Annual Reports, I have nothing to record in the way of schemes for building houses for the working classes by Sanitary Authorities. These are enterprises which are only practicable in the larger centres of population, where the local governing bodies possess the resources which are necessary for carrying them out and where conditions are favourable for doing so.

In rural and small urban districts such as those of which the Combined District mainly consists, the work under the Housing Acts is limited to taking advantage of

every opportunity that offers for preventing existing houses from becoming dilapidated or unsanitary and to close them where their owners cannot or will not put them in repair. But closure is in most rural localities the last resource, since the lack of houses is so great that to close one often means to drive the occupiers into the streets or into the workhouse, sometimes because there are no other houses to be obtained in the neighbourhood and sometimes because the tenants either have large families or are disreputable and owners do not care to let houses to them.

But it is unquestionable that under the steady pressure which is continuously being brought to bear on both owners and occupiers of slum property in Rural as well as in small Urban districts a gradual, though it may be a slow, improvement is taking place, which cannot fail in time to make itself felt in improved health, morals and manners.

FACTORIES AND WORKSHOPS.—The details of the routine of inspection under the Factories and Workshops Acts are given in the separate reports of the several districts which follow this introduction. It is sufficient to say here that they show that this work has been generally carried out with satisfactory regularity. As I have pointed out in previous Annual Reports, although there are a few work places in every district in which mechanical power of some kind is employed, and which are thus factories for the purposes of the Factory Acts, the places in which more than three or four persons are employed in using such power are practically confined to the district of Lydney, where there are large tinplate works of Messrs. Thomas & Co., Gloucester Rural, in which the recently erected engineering works of Messrs. Sisson are situated, and Frenchay, in the Chipping Sodbury district, where Mr. T. Moore carries on flock and tool works. Besides, there are two steam laundries, one at Filton in the Chipping Sodbury Rural district and the other

in the town of Cirencester, which represent all the factories of any importance in the Combined District. And even the two laundries are not factories in the sense in which the word is generally used, but workshops, as they make nothing, but only handle material that is already made up.

So, too, of outworkers. The number employed in all portions of the Combined District is very small, except in a part of the Chipping Sodbury district which is within an accessible distance of Bristol, where a very variable number of persons gain a precarious living by making up clothing for the wholesale clothiers of that city. These latter operatives require a good deal of attention, not only in regard to the observance of the conditions which are necessary for the preservation of their own health, but in regard to infections which they may easily become the means of diffusing through the medium of the clothes which they make.

BAKEHOUSES.—Not the least important item of workshop inspection is that of bakehouses, which come under the Factory and Workshop Acts, as places in which persons are employed in converting raw materials, such as flour, etc., into the manufactured article of bread. Now, although bread is the most largely consumed of all forms of food-stuff, inspection of the persons by whom and the places in which it is produced is not, as in the case of meat and milk, required in the interest of the consumer so much as in that of the producer. For, whilst cleanliness is as desirable in the production of bread as in that of milk and meat, on grounds of general propriety, it is only as a result of culpable negligence after the bread is made and not from uncleanness in production, that bread can become a medium for the diffusion of disease, since it has to pass through the sterilising ordeal of the oven, from which it is, in most cases distributed hot, and therefore not in a condition either to absorb or transmit infection.

It is mainly in the interests of the workers, therefore, that inspection of bakehouses is needed, because baking, if carried on under unwholesome conditions, is one of the most unhealthy of occupations, the operatives in bakeries being especially prone to lung diseases from the combined effects of the flour dust which they are liable to inhale and of the sudden changes of temperature to which they are exposed. So that, whilst outward cleanliness in the bakehouse, as embodied especially in the periodic whitewashing of his premises which every proprietor of a bakery is required to carry out, is important in the interest of the public who eat his bread, what is far more important to the lives of his workmen is roomy and well-constructed workshops, which can be effectively ventilated, so as to reduce both dust and temperature to the lowest practicable point. Unfortunately, the ease with which a man can become a baker in a small way and the great competition which this fact creates, are not favourable to the provision of thoroughly sanitary bakeries. It frequently seems, on inspecting the bakehouse of a man in a small way of business, as if any odd corner of his premises had been thought good enough to turn into a factory for the production of the staff of life. And what is rather curious in regard to the supervision of bakeries is that whilst no one can now commence business as a milk-seller or as a butcher without being registered or licensed, no such requirement obtains in regard to the manufacture or sale of bread. There was practically no legislation as to the conditions under which this business should be conducted for a period of 38 years, from the time when the Bakehouse Regulation Act was passed, in 1863, except in 1867, when bakehouses were specially exempted from the operation of the Factory and Workshops Acts of that year, until 1901, when they were again brought under the operation of the Factory and Workshops Act and more stringent provisions

were made for their regulation. During this long interval, owing to the apathy of local authorities and also to the defective provisions of the original Act, a vast mass of vested interests was allowed to grow up which makes it difficult now to enforce adequate provision for the protection of the health of those who are employed in bakehouses without, in many cases, confiscating the business altogether. Where, as is often the case, the occupier of the premises is the only operative, the conditions imposed may, reasonably, be less coercive than where other persons, and especially young men, work for him. But in all such cases it is of the first importance to point out to the occupier the risk to health which he himself incurs in carrying on his business under unhealthy conditions, and to let him understand that he will not be allowed either to employ others to assist him in his work or to transfer the business to any one else without providing adequate accommodation for carrying on the work under healthy conditions. For this reason it is very desirable that before a man commences business as a baker he should be required to obtain the licence of the Sanitary Authority and not be exposed to the risk of expending money in equipping premises which are not suitable for the business, through ignorance of the safeguards which it requires.

CONTAGIOUS DISEASES OF ANIMALS ACTS.

I have nothing more to report in connection with the general administration of the Cowsheds, Dairies and Milkshops Orders in the Combined District as a whole than the facts that the East Dean and United Parishes Rural Council at their meeting in January of last year resolved, by the casting vote of the Chairman, to adopt Regulations under these Orders, but have not taken any further steps to give effect to this resolution, stating, in reply to an inquiry by the Local Government Board on the subject, as their reason

for not doing so, that they were waiting to learn the nature of the Milk Bill which the President of the above Board had given notice of his intention to introduce into Parliament. The same reason has also been given by the Lydney Rural Council for not taking any action in this matter. As I stated in my last Annual Report, these two District Councils, with the three Urban Councils of Awre, Newnham and Westbury-on-Severn, make up five out of the eleven constituent Authorities forming the Combined District which have not adopted Regulations under the Order, the other four Rural and two Urban districts having done so. In two of the three former Authorities the agricultural influence predominates. It is highly probable that this state of mind is shared by a good many other Sanitary Authorities in which the same predominance exists, for the information which has leaked out as to the drastic character of Mr. Burns' proposed Bill must tend to unsettle bodies which, although many of them have been gradually induced to carry out the Regulations the Local Government Board have imposed as the means of giving effect to the Dairies Order, have not generally done so with much enthusiasm, on the ground that it presses with undue severity on an industry in which the larger number of their individual members are personally interested, and that it has been stimulated into existence by the fear of dangers which they consider have been unduly exaggerated. The actual introduction of the Bill into Parliament, after it had been foreshadowed as one of the leading items of the social policy of the Government, has been so much delayed that it is possible that those who are responsible for it are coming to see that its successful passage through both Houses of the Legislature may involve greater opposition than they had originally anticipated. It is true that a strong propulsive power has been created for the Bill on the part of the consuming public, by the publicity

which has been so freely given by the press to evidence of an unquestionable character as to the extent to which a good deal of the milk that is supplied for the consumption of children especially is impregnated not only with dirt but with the infections of dangerous diseases. If the dairy farmer has not in all cases recognised his responsibility in this matter so readily as he might be expected to do, this is not because he is more perverse or selfish than other traders but is due to two causes for which considerable allowance should be made.

The first of these is want of knowledge, the second is want of cash.

In regard to the first of these deficiencies the majority of cow-keepers have a very imperfect idea of the cleanliness which is necessary in order to keep milk free from obnoxious dirt. They are accustomed to see their farmyards a mass of muck, from which they themselves have experienced no harm and though they know the value of this muck for purposes of manure, they have been in the habit of looking at it, from a sentimental point of view, with very different ideas from those with which, in common with other men, they regard human excrement. They may be pardoned, therefore, if they are somewhat slow to recognise the dangers which they are told on the authority of people whom they are inclined to consider as mere theorists that, in regard to the contamination of milk, there is not much difference between a mixen and a cess pit, and that to milk their cows in close proximity to all the emanations, both vaporous and dusty, of the former is as dangerous to those who have to consume it as if they were to milk them close to a common privy.

But, even where the cowkeeper himself has a just appreciation of this danger and does his best to keep himself and his farmyard as clean as possible, he has to reckon with the farm labourers who assist him in his milking, and whose

hands are so constantly in contact with muck that it would take far more time to bring them twice a day into a condition of sanitary cleanliness than they care to expend. In regard to this matter it is really a national misfortune that women can scarcely ever be found milking now. They are, both by habit and instinct, much more cleanly than men, and a good deal of the deterioration of milk in the matter of dirt is due to milking being done by men instead of women. It is to be hoped that when cow-houses and yards are brought into a more cleanly condition than that in which most of them are now kept, women will be found to object less to milking than they do now. To milk a well-kept cow in a well-kept stall is a task which as well befits a woman as any other she can undertake, and she can do it with much more satisfaction to the cow and with better results all round than a man can.

It is not, however, only in regard to the frame of mind in which the average cow-keeper and his assistants view the relations of muck and milk that the difficulties of obtaining clean milk lie. Even if they have all the appreciation and desire to keep their milk clean that can be wished for they are handicapped in most cases, by defects of construction of the premises in which their work has to be carried on which, instead of making the production of clean milk easy, render it always difficult and often impossible. How is the cow-keeper to get over this difficulty? The law, through the provisions of the Dairies Order and the Regulations which are the outcome of it, tells him that if he wants to have his premises properly constructed in order to facilitate drainage and scavenging, he must do it himself, at his own cost, unless he can induce his landlord to do it for him. How is he to do this when in so many cases he has not the means wherewith to do it? And even if he have the means, why should he be called on to expend them in improving his landlord's property?

It may be said that he can do as the tenants of other premises do when they find them unsuitable for the purposes for which they require them—given them up, unless the owner will put them into proper condition. But the tenant farmer is not in the same position as an ordinary tenant. He knows very well that if he goes to the agent of his landlord, who is the person with whom he mostly has to deal in this matter, and tells him that if his employer does not carry out the improvements which the Sanitary Authority states are necessary to bring his premises up to date for the purpose of obtaining clean milk he, the tenant, must give them up, he may be told that in that case he can clear out as soon as he likes. For the agent is as well aware as the tenant is that directly the farm is known to be in the market applicants will be tumbling over each other in their eagerness to get into it. And where, as is so often the case, the owner, instead of being a man of means, is living upon the rent of the farm, which is collected for and paid to him by a solicitor, the prospects of the tenant getting the required improvements carried out are still less rosy.

But the unfortunate cow-keeper's troubles do not end here. Apart from the question of filth in milk, which is not only disgusting but dangerous, there is the possibility of the milk becoming the medium for the diffusion of dangerous infection in other ways. Against the risk of his milk becoming the means of diffusion of such infections as those of Scarlet Fever or Measles or Diphtheria the cow-keeper can easily guard. To do so he needs to spend no money; he only requires to exercise reasonable and easily practicable precautions. But it is different with the infection of Tubercle. To guard his milk against diffusing this infection he must neither buy an animal that is infected with this disease nor keep one that he has reared if it can be shown that it has acquired the infection. In the first of these

cases he has to face a combination of butchers, auctioneers, and also of men who are carrying on the same business as he is, and who are often not too scrupulous in the readiness with which they seek to shunt a doubtful cow upon a less wide-awake brother farmer.

The recent contest between the butchers and the farmers on the subject of a guarantee against Tubercular infection in the case of animals sold by auction, and the apparent acquiescence of both parties in the solution of their difference by a system of insurance has settled it in a reasonable way ; but, as insurance must be paid for, in whatever proportions it may be divided between them, the net result must be to increase the cost of cow-keeping, unless they can succeed in getting the cost of the insurance out of the consumer. Of course, this charge on cow-keeping would cease to exist if Tuberculosis were effectually stamped out of herds, as it could be by testing every cow with Tuberculin and by getting rid of those animals which responded to the test. But, apart from the cost of employing a veterinary surgeon to apply this test, where the cow-keeper is not sufficiently skilled to do it for himself, there is the much more serious cost of dealing with the cow or calf if it should be found to be infected with Tubercle. Whether it be slaughtered at once, or whether it be treated by the plan of segregation, suggested by *Bang* and practised in Denmark, outlay is involved, which, though it may be met to some extent by compensation is more or less a charge upon the cow-keeper.

From all of these considerations it results that the effort to secure the freedom of milk from dirt and disease, whilst it is in some degree a question of intelligent appreciation and cleanly habits on the part of the cow-keeper, for the exhibition of which there is considerable room for improvement, is mainly a matter of expenditure, on the one hand upon cow-houses and yards, and on the other upon the

removal from every herd of any animal that can be shown to be in a condition to infect others. By the Dairies, Cow-sheds and Milk-shops Order the Legislature has, in the usual rough and ready British fashion, prescribed a remedy for this mischief which would be very effective, and to which there would be very little opposition on the part of Rural Authorities if it did not involve expenditure, often of a considerable amount, on the part of the cow-keeper to carry out its prescriptions. It is understood that the forthcoming Milk Bill will proceed upon the same lines, and by its more drastic requirements will still further accentuate the difficulties under which the cow-keeper already labours.

That the public must be protected against dirty and diseased milk is unquestionable ; but it is only just that as it costs money to do this the public should be prepared to pay the cost of the measures which are necessary to insure this result. Whether this payment shall be in meal or in malt, *i.e.*, by compensation out of taxes or by increasing the price of milk, and how the cow-keeper is to be provided with the means to enable him to supply the public with clean and wholesome milk, if he has the will and the intelligence to do so, are questions which will have to be solved in some way before coercive legislation of any kind can produce a substantial effect.

In the case of improvements in drainage, water supply and other works of an extensive and substantial character the legislature has facilitated their execution by enabling Sanitary Authorities to borrow the money required for the purpose on the security of the rates. Why should it not require the owner of premises, which are let for the production of milk, to provide the equipment necessary to enable it to be produced in a cleanly manner without unreasonable difficulty by facilitating his borrowing the money necessary to do this as a first charge upon the property if he cannot

provide it in any other way ? There is a large number of landlords who have made such provision out of their own pockets, but there are a great many who cannot and some who will not do so. In any case the tenant must be prepared to pay a fair interest on the outlay, and the public must be prepared to pay for it, as I have said, in one way or another.

PUBLIC HEALTH ACTS AMENDMENT ACT, 1907.

In my report on the Chipping Sodbury Rural district I have referred at some length to the refusal of the Local Government Board to comply with the application of the Council of that district to declare Parts II., III., IV. and V. of that Act to be in force in it. The Council of the Lydney Rural district have made a similar application and some correspondence has ensued with the Board in regard to it, so that the matter is, in their case, still in abeyance. As other Rural Authorities in the Combined District have had the Act under consideration, with the view of obtaining the powers which it gives for the better administration of their districts, but have suspended action in consequence of the course which the Local Government Board have taken in the Chipping Sodbury district, it may be well to indicate briefly what the powers are which the Act enables the Board to confer upon local authorities.

The Act is divided into ten parts, two of which are headed "General" and "Miscellaneous" respectively, and which with parts VI., VII., VIII. and IX. are either applicable only to purely urban conditions or are of a general administrative character, and need not be referred to further. The really important parts, for districts, whether Rural or Urban, are II., which deals with Streets and Buildings, III. with Sanitary provisions, IV. with Infectious Diseases and V. with Common Lodging Houses. All of these sections contain provisions

which are as applicable to purely rural as they are to purely urban districts, to small authorities as well as to large ones. Thus, in Part II. there are provisions for controlling the deposit of plans for new buildings, for the repair of private streets, for the definition of "New Buildings," the paving of yards, erection of temporary buildings, deposit of building materials in streets, enclosure of dangerous places and secure fixing of hoardings, some, if not all of which would be useful at times in the small towns or large villages which every large Rural district contains.

In part III. there are a useful extension of the definition of nuisances, provisions for the prohibition of the use of rain-water pipes as soil pipes or ventilating shafts, control of old drains, provision and conversion of closet accommodation, entry of local officials on premises, attachment of urinals to refreshment houses, testing of drains, filling up cess-pools, provision of public conveniences, removal of trade refuse, provision by private owners of drains and by local authorities of ambulances, and declaration of offensive business.

In Part IV. there are some very useful provisions prohibiting infected persons from carrying on business, requiring dairymen to furnish lists of sources of supply, prohibiting infected clothes from being sent to laundries, dealing with infection in schools, removal of persons from infected premises, cleansing and disinfecting of premises, together with others which it is not necessary to specify in detail.

Part V. contains useful powers to enable a local authority to deal more effectively with common lodging-houses than it can do at present.

Now, most, if not all of these provisions, although they were at first granted by Parliament to local authorities who were of sufficient size to enable them to indulge in the luxury of an Act of Parliament, are, as has been suggested above,

calculated to be quite as useful to Rural as they are to Urban Authorities, and it is difficult to understand for what reason the Local Government Board should refuse to put these Authorities in the position of being able to exercise them if they desire to do so. What the law calls *nimia diligentia* is not a fault with which those Authorities can, as a rule, be charged, and as I have suggested when dealing with this matter in my Report on the Chipping Sodbury district, if local authorities did not use the powers when they had obtained them their default would give the Board a useful opportunity of stimulating them to do so by one of its well-considered communications.

It is true that the Local Government Board have intimated to the Chipping Sodbury Rural Council that they are prepared to invest them with the powers given in Sections 61 and 66 of the Act, but, for reasons which I have given in the Chipping Sodbury Report, these powers are much less useful than those contained in various other sections of the Act would be.

SUPPLEMENTARY POWERS.—No action has been taken by any of the authorities in the Combined District to become invested with the powers of any other adopted Act than that above mentioned or to enact bye-laws for any purpose.

In conclusion, I have only to add that although in all parts of the Combined District there is room for improvement, especially in connection with the provision of the resources which are necessary to enable us to meet infectious disease energetically, when it arrives, such as efficient hospital accommodation, ambulance service and disinfecting appliances, all of them, it must be admitted, resources the provision of which involve more or less serious expenditure, there has been a substantial amount of good work done in controlling the conditions which prepare the soil for the spread of infection, by the systematic inspection of those

places and things in which the seeds of infection most readily find their resting place.

In this connection I am glad to say that the staff of inspectors, with one of whom (MR. F. WEAVER, of the Gloucester Rural District) I have had the pleasure of working for 36 years, and from all of whom I have received ready co-operation on all occasions, has never been so efficient as it is at the present time. May it be the aim of all of us, so long as we are permitted to continue in the discharge of our responsible duties, to keep ourselves as much up-to-date as we can with the progress of a science, which involves the application of so many varied branches of knowledge as Sanitary science does.

I have the honour to be,

Gentlemen,

Your obedient Servant,

FRANCIS T. BOND, M.D., LOND.

CHIPPING SODBURY RURAL DISTRICT.

Composition of District: Parishes of Chipping Sodbury, Old Sodbury, Little Sodbury, Westerleigh, Pucklechurch, Wapley, Dodington, Dyrham, Abson and Wick, Doynton, Cold Ashton, Marshfield, West Littleton, Tormarton, Acton Turville, Great Badminton, Horton, Hawkesbury, Alderley, Wickwar, Yate, Frampton Cotterell, Iron Acton, Winterbourne, Filton and Stoke Gifford.

Chairman of Council: CHARLES CORNOCK, Esq., J.P.,
Hawkesbury.

Clerk: Mr. R. WILSON, Chipping Sodbury.

Sanitary Inspector and Surveyor for the Chipping Sodbury portion of the District:—Mr. J. B. ADAMS, Marshfield.

Ditto for the Frampton Cotterell portion: Mr. W. H. WILLIAMS,
Filton.

GENERAL STATISTICS.

	1891	1901	Decrease	Increase
Area of District—69,736 acres				
Inhabited Houses	4707...	4888...	— ...	181
Total Tenements	3901...	3988...	— ...	87
Ditto of less than 5 rooms ...	2025...	1828...	197...	—
Total Population	20820...	22099...	— ...	1279
Males	10161...	11058...	— ...	897
Females	10659...	11041...	— ...	382
Average No. of persons per house	4.4...	4.5...	— ...	0.1

The original Chipping Sodbury district, as it existed when the censuses of 1891 and 1901 were taken, was enlarged in 1904 by the addition of the Winterbourne district, including the parishes of Winterbourne, Filton and Stoke Gifford, which previously formed part of the Barton Regis Union and Rural district. I have extracted the numbers relating to the Winterbourne district from the census reports and have added them to those of the original Chipping Sodbury district. I am unable to give the table of *Comparative Statistics for 35 Years* in this district as I used to do, and as I have done in the case of the other portions of the Combined District, in consequence of a break in my connection with the district in 1904 and 1905, during which period the record is imperfect.

NOTE.—This District was enlarged in 1905 by the addition of three Parishes from the Barton Regis Rural District, which was dissolved in consequence of the extension of the City of Bristol.

It will be seen that there has been an increase both in inhabited houses and in population in the whole of the new district during the inter-census period, the larger proportion of which has been in the added district. A satisfactory feature of the table is the decrease in the old Chipping Sodbury district of tenements with less than five rooms, but as a slight set-off to this there has been a trifling increase in the pressure of population, as indicated by the average of persons per house.

BIRTHS AND THE BIRTH-RATE.—The total number of births and deaths for the year 1908, and the rates per 1,000 of the estimated population of the district, together with the corresponding figures for 1905, 1906, and 1907 are given in the following table :—

Year	Population estimated to middle of Year.	BIRTHS.		TOTAL DEATHS REGISTERED IN DISTRICT.			
				UNDER 1 YEAR.		AT ALL AGES.	
		Number.	Rate.	Number.	Rate per 1000 Births.	Number.	Rate
1905 ...	21784	520	23·8	43	87	284	13·0
1906 .	21894	520	23·7	39	75	266	12·1
1907 ...	21904	489	22·3	28	57	266	12·1
Average		509	23·2	36	73	272	12·4
1908 ...	22026	472	21·4	41	86	266	12·0

The birth-rate for 1908 is lower than that for 1907 and the two preceding years, and is the lowest I have yet recorded for this district. It compares very unfavourably with that for the whole of England and Wales (26·5). It is not easy to account for so low a birth-rate, for though the bulk of the population is agricultural and may be assumed, therefore, to be largely made up of elderly persons and juveniles, there is in the westernmost portion of it a considerable industrial element, which might be expected to show a much higher rate of reproduction.

In my last Annual Report I gave a table of the actual number of births in the different registration portions of the district, with the view of discovering in what part of the district the decrease in the birth-rate was taking place. I here reproduce the table with the addition of the births registered in the several districts in 1908. In 1907 there was a decrease in the births registered in every district, except in that of Chipping Sodbury, the largest decrease being in the Iron Acton district.

District	1906		1907		1908		Mean	Illegitimate	
Chipping Sodbury ...	112	...	118	...	98	...	109	...	1
Winterbourne ...	110	...	109	...	92	...	103	...	3
Hawkesbury ...	71	...	67	...	69	...	69	...	1
Marshfield ...	78	...	68	...	98	...	81	...	1
Iron Acton ...	149	...	127	...	115	...	130	...	5
Total ...	520	...	489	...	472	...	492	...	11

This year the Chipping Sodbury district shows a large decrease, as also does that of Iron Acton. In fact this district and that of Winterbourne, the two in which, from the character of the population, the decrease in the births might have been expected to be least, have each exhibited a continued decrease during the last three years.

DEATHS AND THE DEATH-RATE.—The deaths recorded in the above table (266) are those actually registered in the district and give a crude death-rate of 12·0 per thousand of the population estimated to be living at the time in the district. They have to be corrected by adding the deaths of persons belonging to the district who are known to have died outside of it (17) and deducting the deaths registered in the district of persons who died in public institutions in it but who did not belong to it (9). This gives a total corrected mortality of 274 and a corrected death-rate of 12·4. These data, with the corresponding numbers for the three previous years, are shown in the following table :

Year	Deaths in public institutions in the district	Deaths of non- residents in public institutions in the district	Deaths of residents in public institutions beyond the district	Nett deaths at all ages belonging to the district. No.	Rate
1905	... 24	... 3	... 3	... 284	... 13·0
1906	... 30	... 6	... 17	... 277	... 12·6
1907	... 23	... 3	... 20	... 283	... 12·9
	—	—	—	—	—
Average	25	4	12	281	12·8
	—	—	—	—	—
1908	... 13	... 9	... 17	... 274	... 12·4

Institutions within the District receiving sick and infirm persons from outside the district—Northwood House, Frampton Cotterell.

Institutions outside the district receiving sick and infirm persons from the district—Royal Infirmary, General Hospital and Children's Hospital, Bristol; United Hospital, Bath; and County Asylum, Gloucester.

Union Workhouse—Within the District.

The corrected death-rate of 12·4 per thousand of the population is the lowest I have ever recorded in this district and, like the birth-rate, is lower than the average death-rate of England and Wales for the year (14·7).

MORTALITY AT DIFFERENT AGES AND ITS CAUSES.

The annexed table exhibits the principal causes of deaths which have been registered during the year 1908, and the ages at which they have occurred :—

DEATHS IN OR BELONGING TO WHOLE DISTRICT
AT SUBJOINED AGES.

AT SUBJOINED AGES.		Rest of District																															
CAUSES OF DEATHS.	All ages.	Under 1 year.	1 and under 5.	5 and under 15.	15 and under 25.	25 and under 65.	65 and upwards.	Rest of District																									
								Hawkesbury	Tormarton	Acton Turville	Horton	Little Sodbury	Badminton	Yate	Prampton Colterell	Wickwar	Iron Acton	Marshall	Wick	Doynton	Dyham	Cold Ashton	Hinton	Chipping Sodbury Rural	Westleigh	Old Sodbury	Pucklecumb	Winterbourne	Hambrook	Frenchay	Filton	St. Gifford	
Measles ..	2.	1.	1.	0.	0.	0.	0	0.	1.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.		
Scarlet Fever ..	2.	0.	1.	1.	0.	0.	0	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	
Whooping Cough ..	2.	1.	1.	0.	0.	0.	0	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	
Diphtheria ..	2.	0.	1.	1.	0.	0.	0	0.	0.	0.	0.	1.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	
Influenza ..	6.	1.	0.	0.	0.	1.	4	0.	0.	0.	0.	0.	2.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	
Diarrhoea ..	1.	0.	1.	0.	0.	0.	0	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	
Enteritis ..	2.	1.	0.	1.	0.	0.	0	0.	1.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	
Other Sep. diseases	3.	1.	1.	0.	1.	0.	0	1.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	
Phthisis ..	17.	0.	0.	1.	2.	14.	0	4.	0.	1.	0.	0.	2.	0.	0.	1.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	
Other tubercular diseases..	7.	0.	2.	1.	2.	2.	0	1.	0.	0.	0.	1.	1.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	
Cancer & Malignant Disease ..	25.	0.	0.	0.	0.	13.	12	4.	1.	0.	0.	0.	4.	1.	2.	0.	1.	1.	0.	0.	0.	0.	2.	2.	0.	1.	1.	1.	3.	0.	0.	0.	0.
Bronchitis ..	32.	5.	2.	0.	0.	4.	21	2.	1.	2.	1.	1.	0.	3.	0.	1.	2.	3.	1.	0.	0.	0.	1.	2.	0.	4.	4.	1.	2.	0.	1.	0.	0.
Pneumonia ..	16.	6.	1.	2.	0.	2.	6	1.	1.	0.	0.	0.	3.	1.	1.	0.	2.	0.	0.	0.	0.	0.	0.	1.	1.	1.	1.	1.	0.	1.	0.	0.	0.
Other diseases of Respiratory Organs	1.	0.	0.	0.	0.	1.	0	0.	0.	0.	0.	0.	0.	0.	1.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
Cirrhosis of Liver ..	1.	0.	0.	0.	0.	1.	0	1.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
Premature Birth ..	12.	12.	0.	0.	0.	0.	0	2.	0.	1.	0.	0.	0.	1.	0.	2.	1.	0.	0.	0.	0.	0.	0.	0.	0.	0.	1.	1.	0.	0.	1.	0.	0.
Heart disease ..	43.	1.	1.	0.	0.	9.	32	5.	2.	0.	1.	0.	0.	2.	6.	1.	1.	2.	0.	1.	0.	1.	3.	2.	0.	5.	6.	1.	1.	1.	0.	0.	0.
Accidents ..	12.	2.	0.	1.	2.	5.	2	0.	0.	0.	0.	0.	1.	1.	2.	0.	0.	0.	0.	0.	0.	0.	2.	1.	0.	1.	1.	1.	0.	2.	0.	0.	0.
Suicides ..	1.	0.	0.	0.	0.	1.	0	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
Malformed Heart ..	1.	1.	0.	0.	0.	0.	0	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
All other causes ..	86.	9.	3.	2.	0.	19.	52	5.	2.	0.	1	1.	4.	9.	2.	9.	7.	7.	1.	0.	2.	0.	6.	5.	6.	6.	5.	0.	1.	2.	2.	2.	2.
All causes ..	274.	41.	15.	10.	7.	72.	129	26.	8.	6.	3.	2.	3.	19.	23.	9.	14.	16.	14.	4.	2.	2.	2.	15.	15.	8	22.	24.	6.	10.	8.	3.	10

The deaths in the foregoing table from notifiable infectious disease are below the average, whilst those from Cancer and malignant disease generally are unusually high. This latter fact is the more remarkable, as the deaths at 65 years of age and over, which is the cancer age, are not correspondingly high. The mortality from Phthisis and other forms of Tuberculosis is about the average for the district, In other respects the table presents no subject for comment.

The following table shows the

INFANTILE MORTALITY

for the year 1908 :—

	Deaths Under												Total
	1 week	2 weeks	1 month	3 months	6 months	9 months	1 year						
Measles ...	0	0	0	0	0	1	0	1					
Whooping Cough	0	0	0	0	1	0	0	1					
Enteritis	0	0	0	1	0	0	0	1					
Premature birth	7	5	0	0	0	0	0	12					
Atrophy													
Marasmus	2	0	1	0	0	0	0	3					
Convulsions	2	0	2	0	0	1	0	5					
Bronchitis	0	0	0	0	0	2	3	5					
Pneumonia	0	0	1	2	2	0	1	6					
Suffocation	0	0	1	1	0	0	0	2					
Other causes	3	0	0	1	0	1	0	5					
Total	14	5	5	5	3	5	4	41					

Births in the year—Legitimate 461, Illegitimate 11.

Deaths in the year—Legitimate 40, Illegitimate 1.

The actual number of deaths under one year, as shown by the above table, is somewhat higher than it was last year, but the rate per 1,000 births (86) is not excessive, especially when compared with that for England and Wales generally (121).

The number of cases of

NOTIFIABLE DISEASE

reported during the year 1908 was 70, the ages and distribution of which are shown in the following table :—

Cases notified in District.								Cases Notified in Special Localities																		Removed to Isolation Hospital
DISEASES.	All Ages	Under 1 year	1 and under 5	5 and under 15	15 and under 25	25 and under 65	65 and upwards	Iron Acton	Chipping Sodbury	Shortwood	Hawkesbury	Pucklechurch	Westerleigh	Marshfield	Winterbourne	Frampton Cotterell	Dyrham	Doynton	Filton	Tresham	Frenchay	Acton Turville	Wick	Hinton	Hambrook	
Scarlet Fever	42	0	5	32	2	3	0	0	2	2	0	1	0	0	1	1	13	7	0	0	0	0	6	8	1	3
Croup and Diphtheria	18	0	3	11	2	2	0	1	0	1	0	1	2	2	2	1	1	0	1	0	3	3	0	0	0	2
Enteric Fever	4	0	0	2	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	3
Erysipelas	6	0	0	0	1	4	1	0	1	0	1	1	0	0	0	0	0	0	3	0	0	0	0	0	0	0
Erysipeloid	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Erysipeloid	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Erysipeloid	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	70	0	8	45	6	9	2	1	3	3	1	3	2	2	3	2	14	7	4	4	3	3	0	8	1	8

The total number of cases of infectious disease notified during 1908 was considerably less than half of those notified in 1907. As in the latter year, exactly three-fifths of them were cases of Scarlet Fever, mostly of the mild type which is now generally prevalent, and of the total number of 42, 34 were in the adjoining parishes of Dyrham, Doynton, Wick and Hinton. One of the two fatal cases occurred at Dyrham, into which the infection was imported from Pucklechurch, where only four cases were notified, not one of which was fatal. The case at Pucklechurch, which is recorded in the mortality table as fatal, was not notified and was only discovered in consequence of its having been certified as a death from "Heart Disease" following Scarlet Fever. The case was so mild in its general character that its true nature was not recognised by the parents, and no medical man was called in until the child became really ill from heart disease.

The number of cases notified under the head of Croup and Diphtheria was also less than half the number notified in 1907. It might be supposed that this diminution was due to the association which is often exhibited in regard to the prevalence of Diphtheria and Scarlet Fever in a common

outbreak. But this explanation does not appear to apply here, for it will be seen from the table that the two diseases occurred mainly in different localities and that those in which Scarlet Fever was most prevalent had very few cases of Diphtheria.

The four cases of Enteric Fever all occurred in a single outbreak at Tresham and in a single family ; three of them were removed to the Isolation Hospital on Sodbury Common. There were no fatalities, although two of the cases were severe. The origin of the outbreak was obscure. It did not appear to be connected in any way with the water supply used by the family, which was that of a spring in the hamlet used in common by other persons who were quite unaffected. The first person to be attacked was a young woman aged 21, about seven weeks after confinement, and the whole outbreak, which did not extend beyond the family in question, had more the appearance of a diffused attack of what was primarily Puerperal Sepsis than of ordinary Enteric Fever, though the characteristic confirmatory test of the latter was obtained.

ARREST OF INFECTIOUS DISEASE.

VACCINATION.—In the general introduction to this Report will be found the statistics of infant vaccination in the Chipping Sodbury district, during the year 1907, the last complete year for which they are, at the time of printing this Report, available. They show a high percentage of successful vaccination in infancy and indicate that the juvenile population of the district is, on the whole, well protected against any sudden incursion into it by Small-pox. But it is well to remember that it is to children of the school age alone that this remark applies. The adult portion of the population are, probably, in much the same position of more or less diminished immunity against Small-pox, in proportion

to the time that has elapsed since their infantile vaccination, as are the rest of the population of the country, in all but those localities in which a recent visitation of the disease has led to the extensive adoption both of vaccination and re-vaccination. The force of this reservation will be more evident when the sanitary history of the present year comes to be written, in connection with a serious outbreak of Small-pox which has occurred in a portion of this district prior to the writing of this Report.

The chances of such an occurrence are largely dependent on the freedom or otherwise of the City of Bristol from the infection of Small-pox. During the past year only one case of the disease appears to have been notified in Bristol, and the surrounding Gloucestershire districts have been correspondingly free.

ISOLATION HOSPITAL.—During the course of the past year eight cases of infectious disease have been removed to the hospital on Sodbury Common, *viz.* : three of Scarlet Fever, three of Enteric Fever, and two of Diphtheria, so that it has been somewhat more largely used than it was in 1907.

So far as its general condition and equipment are concerned the hospital remains unaltered except that the roof exhibits evidence of leakage in heavy rain

WORKS OF CONSTRUCTION.

SEWERAGE.—The most important work of the year in this department has been the adoption by the District Council of a scheme for the drainage of the parish of Filton, prepared by MR. A. P. COTTERELL, M.I.C.E., of Bristol, who has for some years acted as Building Surveyor to the District Council, for this part of the district as well as to their predecessors in the control of it, the late Barton Regis District Council, and who is well acquainted with its requirements and physical conditions.

MR. COTTERELL'S original scheme involved the collection of the whole of the sewage of the district to a single outfall on the North-east side, where it would have to be treated on a sewage farm and the purified effluent carried into the Severn by a brook which runs thereby. But, in consequence of unfavourable levels, it would be necessary, in order to realise this result, to pump a considerable portion of the sewage on the western side of the parish ; and this was the weak point of an otherwise carefully designed scheme.

On the application of the District Council to the Local Government Board to sanction a loan of £5,740 for the purpose of carrying out this scheme a public inquiry was held, as the result of which the Board suggested the desirability of the Council approaching the Bristol Urban Council for the purpose of making an arrangement with that body to receive the whole of the Filton sewage into the sewers of Westbury-on-Trym, which were constructed during the existence of the late Barton Regis Council, of whose district it then formed a part, though it has since been incorporated with the City of Bristol. To do this the conditions of the original scheme would have to be reversed ; the sewage of the greater portion of the present population of the parish, as well as of that which may be expected to locate itself there in the near future, gravitating towards this new outfall, whilst that of only a small portion would have to be pumped to the higher level. Upon this a communication was made to the Corporation of Bristol on the subject, with whom negotiations in regard to it were going on at the close of the year.

The only other matter connected with sewerage that has been under the consideration of the Council during the year was the construction of a short sewer at Aeton Turville, for the purpose of abating a nuisance there caused by the accumulation of the sewage of the village. At the request

of the Local Government Board I made a special report on the subject, which was referred to a parochial Committee, who carried out the necessary work, at a small cost, and the nuisance has not recurred.

WATER SUPPLY.—No work of any importance in connection with water supply has been undertaken or considered by the Council during the year.

PUBLIC HEALTH ACTS, AMENDMENT ACT 1907.—In the early part of the year the District Council resolved to adopt parts 1, 2, 3, 4, and 5 of this Act and forwarded a resolution to that effect to the Local Government Board.

It may be well to state what the purview of these several parts is. Part I. contains various provisions of a general administrative character relating to procedure and other matters. Part II. deals with streets and buildings. Part III. contains powers for dealing with various sanitary matters of a constructive character. Part IV. contains powers for dealing with infectious disease. Part V. contains powers for more effectually controlling Common Lodging Houses. Most if not all of these powers have been granted to some of the larger Urban Sanitary Authorities by Parliament in local Acts, and it seemed to the Council that there could be no objection to their being invested with them for prospective use when there might be need for using them, even if they were not absolutely necessary at the present time.

In the month of October a letter was received from the Local Government Board stating that they were not prepared at present to sanction the adoption of any of the sections of the Act by the District Council except sections 61 and 66, and these only on the Council informing the Board that they were prepared to take the necessary steps to exercise the powers of such sections. On this the Council resolved to take the necessary steps for the exercise of such functions under these sections.

It may be well also to state what the powers conferred by these sections are. Section 61 empowers a local authority, whether it has adopted Section 15 of the Infectious Diseases Prevention Act, 1890, or not, to provide temporary shelter or house accommodation, with any necessary attendants, for any person who, in any case to which this section applies, leaves a house after any infectious disease has appeared therein, and the local authority may borrow, subject to the provisions of the Public Health Acts, for the purpose of providing shelter or house accommodation under Section 15 of the Infectious Diseases Prevention Act, 1890, or under this Section.

The section further empowers the local authority, on the appearance of infectious disease in a house, to remove any resident in the house, who is not himself sick, to their temporary shelter, on the consent of the parent or guardian, if the person to be removed is a child, or, if the person so sought to be removed is not willing to go to the shelter, he may be forcibly removed to it on the order of two justices, who must be satisfied of the necessity of the removal.

So that, to enable the powers of this section to be of any practical value in the case, which is by no means an unlikely one, of it being desired to remove one or more children from a house in which an infectious disease, say Scarlet Fever, has attacked another child, in order to prevent them being attacked by the disease, in face of refusal by the parent, say the mother, to allow this to be done, the following are the steps which would have to be taken : (1) the local authority must provide and maintain a suitable shelter, with proper attendance and other resources ; (2) somebody, either the Medical Officer of Health or the Sanitary Inspector, must find two justices of the peace, whom he must satisfy (it does not appear whether he is to satisfy them severally or conjointly, but it may be supposed, from analogous cases in which the

order of two magistrates is required, that they must be together in session) that the case is not simply a proper but a necessary one for removal. (3) Having obtained his order, the Sanitary Officer has then to forcibly remove the children, in the face of the opposition of the mother or to overcome the opposition by appealing to her reason or by frightening her with the terrors of the law in case of her continued obstruction.

It is true that all these steps have also to be gone through in the case of the desire of the Sanitary Official to remove a child who is actually infected, not to a temporary shelter, but to a permanent hospital, in the face of the opposition of the parent. But the difference between these two cases is much the same as if a policeman were to find a child waving a lighted candle about in a store for petroleum. He would be more likely to prevent a conflagration by at once removing the light, which his existing powers enable him to do, than by endeavouring to remove the petroleum.

This section may be a useful one in large urban districts, but, so far as my own experience goes, I do not think it will materially help to arrest the spread of infectious disease in the smaller urban or in rural districts.

The other section of the Act which the Local Government Board have offered to confer on the Chipping Sodbury Council, Section 66, empowers a local authority, on the receipt of a certificate from its Medical Officer of Health, or any other legally qualified medical practitioner, that any dangerous infectious disease would be prevented or checked by the disinfection of any premises or articles therein, or, in the latter case, by their destruction, to require the owner of the house, after receipt of a notice to cleanse or disinfect such premises or articles or to destroy the latter, and if, after receipt of the notice, he either neglects to comply with the notice or refuses his consent to the intervention

of the Sanitary Authority for that purpose, then the Authority may cleanse or disinfect the premises or articles or may destroy the latter, but if they do so they must compensate the master or owner of the house or of the article for any unnecessary damage thereby caused to the house, part of a house or article, and it is expressly added that "when the local authority destroy any article under this section they shall compensate the owner thereof, and the amount of any such compensation shall be recoverable in a summary manner," *i.e.*, by its owner.

The question of compensation for the destruction of articles that may require to be destroyed, as not being worth disinfecting, such as old clothes, or not being capable of being effectually disinfected, such as bedding, in localities where there is no means of disinfecting by heat, is one which mainly requires to be discussed when Small-pox is prevalent, and is generally settled in rural and the smaller urban districts by a rough and ready method of assessment which, as a rule, errs on the side of liberality to the owner of the articles. It does not seem that the provisions of this section will materially help such a settlement.

Apart from these two sections there are other sections of the Act which would be much more helpful to many local authorities, and it is not easy to see why there should be a difficulty in investing authorities who apply for them with the powers they give. They are scarcely likely to be used with excessive ardour, and if they were not used at all it might be a justification for the Local Government Board putting pressure on those Councils who had obtained them to do what the young lady in *Punch* implored her Edwin to do when he presented her with some artistic knick-knacks, to "live up to them."

RIVER POLLUTION.—There have been no complaints during the year of any nuisance from the Wickwar sewage

works or of the pollution of the Boyd brook at Wick, and no action has been taken to deal with the latter of these nuisances.

In the month of August a complaint was made to the District Council of a nuisance in the Cow mill-pond at Chipping Sodbury, which was alleged to arise from the sewage of the town finding its way into it, and also from a quantity of offensive mud and sediment having been washed down into the pond by the hatch having been lifted for the purpose. The owner of the pond requested the Council to have the pond cleaned out. The matter was referred to the Chipping Sodbury Parish Council, who subsequently reported to the District Council denying any responsibility in the matter and stating that, as the result of their enquiries, "They were of opinion that no deposit of any kind found its way to the Cow mill." A copy of this letter was forwarded by the District Council to the complainant, but whether she was satisfied with this somewhat hardy statement I cannot say. Anyhow, no further action appears to have been taken by her in the matter, which is undoubtedly a serious one, as it raises the whole question of the drainage of Chipping Sodbury, a question which has been postponed by special devices for mitigating the nuisance caused by it for some years past, but which will have to be faced some time or other.

At the same meeting of the District Council, in September, at which this spectre was temporarily again laid to rest, an equally serious sewage ghost was raised in the opposite end of the district, at Hambrook, by a memorial bearing 109 signatures of residents and owners of property at Winterbourne Down, Hambrook and Whiteshill and of members of the Committee of Hambrook Cottage Hospital, calling the Council's attention to the very serious nuisance arising from the Mangotsfield Sewage Works, which was

alleged to be of grave importance as affecting the Hambrook Village Hospital, and stating that throughout the then summer the nuisance had continued unabated, and asking, in the interest of the neighbourhood, that the matter might be dealt with.

DR. CROSSMAN, of Hambrook, also attended before the Council and gave personal explanation in support of the complaint.

As a commencement of action in the matter the Council requested me to visit the Mangotsfield Sewage Works and to report thereon, and MR. W. H. WILLIAMS, the recently appointed Sanitary Inspector for that portion of the district, was instructed to make daily observations on the condition of the brook and of the sewage effluent.

In compliance with this request I visited the sewage farm in question on December 4th, in company with MR. WILLIAMS. We were received very courteously by the custodian, MR. HOOPER, who showed us over the whole of the premises and gave us full information as to the method of dealing with the sewage.

The farm receives the sewage of a population of about 9,000 persons and is of the ordinary domestic character, there being no factories of any importance or breweries in the district. It is received into three tanks, two of them constructed some time ago, and one more recent and larger. These tanks, which are covered, are intended to serve the purpose, successively, of tanks of deposit and of septic decomposition, but there did not appear to be any observable change in the sewage at its entrance to and exit from them.

The effluent is then distributed by rotating perforated spray pipes over four circular filters of coke or slag, but, again, the effluent from these filters did not appear to be materially improved, indicating that the quantity of sewage dealt with is greater than the purifying power of the beds.

The effluent is then carried to a withy bed about 150 yards distant and there distributed by open carriers. But here also the quantity of sewage appeared to be in excess of the absorptive power of the beds, though its character was distinctly improved, when it is turned into a brook on the premises by which it is carried into the Frome stream, of which complaint is made, at a distance of about a quarter of a mile.

Generally, the arrangement is a good one and well designed. The defect seems to be in the insufficiency especially of tank and filter provision to deal with the large volume of sewage which has to be dealt with, especially at this season of the year and in stormy weather generally. At such times the sewage has to be diverted from the tanks and run directly into the brook.

The custodian appears to be well acquainted with his work and to be doing his best to obtain good results with insufficient resources.

At the time of our visit (a damp, cold and cloudy day) there was no offensive smell from the works that could have been perceptible for more than a few hundred yards at most, but there is evidence to show that at the point where the brook joins the Frome there is a most offensive smell about 9 a.m. and at varying times in the evening when the effluent into the Frome, which, when I inspected it, was scarcely darker than the Frome itself and quite inodorous, is said to become dark and smell strongly.

It is also stated that the custodian occasionally sweeps the deposit in the Frome down the stream with a broom.

From these facts it is clear that the main if not the sole cause of the nuisance of which complaint is made at Ham-brook is the escape of imperfectly clarified sewage from the Mangotsfield Sewage Farm into the Frome stream.

ALLEGED NUISANCE IN THE FILTON BROOK.—Complaints have been made to the District Council, especially during the latter part of the year, of a nuisance in the brook at Filton from sewage escaping into it, mainly from a steam laundry there. This is an old trouble, and it was to remedy these complaints that the scheme for draining Filton, referred to above, was primarily undertaken. When it is completed the ground for them will be removed. So serious have been some of the complaints that the District Council have been threatened with legal proceedings in one case. Meanwhile, steps have been taken for the temporary palliation of the evil by cleaning out the brook when needed.

I am glad to report that no complaints have been received during the year with regard to the Wickwar brook, that venerable nuisance which occupied the time of the Council for so many years. When I recently inspected the sewage works there the stream appeared as clear below the outfall as it was above it.

GENERAL ROUTINE OF SANITARY INSPECTION.—In pursuance of a recommendation by the Local Government Board the District Council decided in the earlier part of last year to divide the inspection of the district between two Inspectors of Nuisances, apportioning to MR. J. B. ADAMS, who has for upwards of 25 years acted as Inspector of the whole of the old district and for four years has also had the three added parishes under his charge, what may be considered roughly as the eastern half of the whole district, and appointing a new Inspector for the western half, including the two large and important parishes of Winterbourne and Filton.

The new post was advertised at a salary of £100 per annum, and MR. W. H. WILLIAMS, of Bristol, was elected out of a large number of applicants.

The following summary of work by MR. J. B. ADAMS, represents, therefore, the routine inspection of the whole of the district up to September 29th, and of his diminished district from that period to December 31st.

HOUSE ACCOMMODATION :

Existing houses cleansed under Section 46, Public Health Act, 1875	...	...	0
„ „ closed under Section 32, Housing of Working Classes Acts	...	...	0
„ „ placed in habitable repair	...	...	12
„ „ demolished	...	...	2
„ „ overcrowded, dealt with	...	...	2
New „ water certificates granted	...	...	3
„ „ plans for, under bye-laws, approved...	...	...	4

DRAINAGE :

Existing drains cleansed...	...	...	...	...	15
„ „ repaired or re-constructed	...	...	...	...	50
Houses connected with sewers	...	...	...	...	1
Closets connected with water service	...	...	...	...	2

WATER SUPPLY :

Defective supplies improved	..	..	...	...	0
New supplies provided—					
(1) By wells...	..	...	...	..	0
(2) By connection with water mains	...	...	...	...	26
No. of wells closed	...	...	...	...	0
„ samples taken for examination	...	..	...	...	0

EXCREMENT DISPOSAL :

Existing closets closed after notice	...	...	...	...	0
„ „ repaired or re-constructed	...	...	...	...	10
Notices to empty privy vaults served...	...	...	...	...	12
New earth closets, pail closets or improved privies provided	...	...	...	...	8

GENERAL NUISANCES :

Pig nuisances reported	...	...	...	...	30
Offensive refuse removed	...	..	...	...	25
„ ditches cleansed	...	...	...	..	0

INFECTIOUS DISEASES :

Cases visited and reported on	...	...	..	...	64
Houses cleansed and disinfected	...	...	..	...	48

PURVEYANCE OF FOOD :

Dairies, cowsheds and milkshops registered and inspected	...	...	...	...	70
Slaughter-houses ditto	...	...	...	...	14
Bakehouses ditto	...	...	..	...	27
Seizures of unsound food	..	...	...	..	0

FACTORIES AND WORKSHOPS ACT :

Factories registered and inspected	9
Workshops and workplaces inspected	62
Residences of outworkers inspected	250
No. of above employing young persons	0

GENERAL PROCEDURE :

Complaints received	0
Notices served	250
Statutory notices issued	0
Summonses issued	0
Nuisances abated without formal notice	15

The following summary of work has been supplied to me by MR. W. H. WILLIAMS, but as it covers at most only the last three months of the year, and as the work was entirely new to him, it is necessarily of an imperfect character.

HOUSE ACCOMMODATION :

Existing houses cleansed under Section 46 Public Health Act, 1875	0
" " placed in habitable repair	0
" " overcrowded, dealt with	1
New " water certificates granted for	3
" " plans for, under bye-laws, approved... ..	4
Alterations and additions by plans approved	2

DRAINAGE :

New drains provided	0
Existing drains cleansed	2
" repaired or re-constructed	3
Houses connected with sewers	0
Closets connected with water service	1

WATER SUPPLY :

Defective supplies improved	0
New supplies provided (1) by wells	0
" " " (2) by connection with water mains	0
No. of wells closed	0
No. of samples taken for examination	1

EXCREMENT DISPOSAL :

New closets provided	0
Existing closets cleansed	2
" " repaired or reconstructed	1
Notices to empty privy vaults served (informal notices only)	4
New earth closets, pail closets or improved privies provided	0

GENERAL NUISANCES :

Pig nuisances reported	2
Offensive refuse removed	2
" ditches cleansed	1
(Upper portion of sewage ditch at Filton).	

INFECTIOUS DISEASES :

Cases visited and reported on	2
Houses cleansed and disinfected	2

PURVEYANCE OF FOOD :

Dairies, Cowsheds and Milkshops registered and inspected	39
Defects remedied	0
Slaughter-houses	5
Bakehouses	13
Seizures of unsound food	0

FACORIES AND WORKSHOPS ACT :

Factories registered and inspected	1
Workshops and Workplaces inspected	4
Residences of outworkers inspected	22
No. of above employing young persons	0
Insanitary conditions dealt with not included in return of general nuisances	3

ELEMENTARY SCHOOLS :

No. in district	15
No. of insanitary conditions dealt with	1
Nature of water supply and whether satisfactory or not	Quite satisfactory

GENERAL PROCEDURE :

No. of Complaints received	15
" " Nuisances reported to District Council	17
" " Notices served	21
" " Statutory notices issued	1
" " nuisances abated without formal notice	30

As nearly the whole of the workshops and out-workers in the Chipping Sodbury district are in MR. WILLIAMS' portion of it, and as a good deal of his time during the period from October to December 31st was occupied in the supervision of new buildings and other matters in the parishes in the neighbourhood of Bristol, the return of work under the Factories and Workshops Acts is intelligibly imperfect.

In this and in other respects the work of inspection during the past year has been interrupted, and the record of it is not so satisfactory as in previous years. But it may be assumed that these defects will be rectified during the present year.

In addition to the items in the two above returns as to plans for new buildings under bye-laws approved by the Council during the year I am indebted to MR. A. P. COTTERELL for the following information as to plans which have passed through his hands during the past year :—

		Winterbourne and Stoke Gifford.		Filton.
New Dwelling Houses—Submitted ...	...	5	...	—
,, ,, Approved ...	...	5	...	—
Additions to Houses, &c.—Submitted	...	1	...	2
,, ,, Approved	...	1	...	2
Stables and Sheds—Submitted	...	—	...	1
,, ,, Approved	...	—	...	1
No. of Houses Certified under the Public Health (Water) Act, 1878		1	...	6

The water supply of all new houses is from the West Gloucester Company's mains.

FRANCIS T. BOND, M.D.,
Medical Officer of Health.

CIRENCESTER RURAL DISTRICT COUNCIL.

Composition of District :—Parishes (36) of Sapperton, Edgeworth, Duntisbourne Abbots, Duntisbourne Rouse, Winstone, Syde, Brimpsfield, Elkstone, Colesbourne, Rendcombe, North Cerney, South Cerney, Bagendon, Daglingworth, Baunton, Stratton, Coates, Rodmarton, Siddington, Preston, Harnhill, Driffild, Barnsley, Ampney Crucis, Ampney St. Peter, Ampney St. Mary, Poulton, Down Ampney, Maiseyhampton, Kempsford, Fairford, Quenington, Hatherop, Kemble, Pool Keynes and Somerford Keynes.

Chairman of Council: The REV. W. FAWCETT, M.A., Somerford Keynes.

Sanitary Inspector: Mr. E. J. MATHEWS, Cirencester.

GENERAL STATISTICS.

				1891		1901		Decrease
Area	...	...	...	83644	...	80991	...	2653
Inhabited Houses...	...	...	...	2979	...	2931	...	48
Total Tenements	...	...	...	3067	...	2948	...	119
Ditto of not less than 5 rooms	...	...	...	1650	...	1543	...	107
Total Population	...	...	...	12877	...	12084	...	793
Males	...	...	...	6329	...	6004	...	325
Females	...	...	...	6548	...	6080	...	468
Average No. of Persons per house				4·3	...	4·1	...	0·2

The foregoing statistics indicate that the district is, with the exception of the small town of Fairford, a purely rural one, with a decreasing population. The sole industry of any importance is agriculture, the chief feature of which is the breeding of the well-known Cotswold sheep. But a good deal of milk is produced in some parts of the district, which is sent mainly to London.

COMPARATIVE STATISTICS FOR 35 YEARS.

BIRTHS—						1908.	Highest No. in 35 years.	Lowest ditto.
Males	...	...	...	...	...	141	254	113
Females	...	...	...	...	...	119	242	119
Total	...	...	...	...	...	260	(1874) 496	(1908) 260
Ratio of Births per 1000 of population						22·5	33·9	21·8
DEATHS—								
Small Pox and Chicken Pox	...	...	...	...	...	0	1	0
Measles	...	..	...	...	...	2	15	0
Scarlatina	...	...	...	...	...	0	7	0
Croup and Diphtheria	...	...	...	...	...	2	17	0
Whooping Cough	...	...	...	...	...	1	8	0
Other Septic Diseases	...	...	...	...	...	1	0	0
Cholera, Diarrhoea and Dysentery	...	...	...	...	...	2	7	0
Puerperal Fever	...	...	...	...	...	0	—*	—
Erysipelas	...	...	...	...	...	0	—*	—
Total Deaths from Septic Diseases	...	...	...	...	...	8	29	3
Ratio per 1000 of population	..	...	...	...	...	0·69	—	—
Total Deaths from all causes	...	...	...	...	...	157	(1875) 303	(1896) 150
Ratio of Deaths per 1000 of population	...	...	...	...	...	13·6	17·9	11·1
Deaths under 5 years of age	...	...	...	...	...	26	92	14
" " 1 " " per 1000 births						82	80	—

The high birth and death-rates of 1874 and 1875 have been followed by a steady decline ever since, as might be expected from the statistics of population in the preceding table.

DECENNIAL BIRTH AND DEATH RATES.

Year.	Population estimated to middle of Year.	TOTAL DEATHS REGISTERED IN DISTRICT.					
		BIRTHS.		UNDER 1 YEAR.		AT ALL AGES.	
		Number.	Rate.	Number.	Rate per 1000 Births.	Number.	Rate.
1898 ...	12317 ...	283 ...	22.9 ...	27 ...	95 ...	169 ...	13.6
1899 ...	12237 ...	297 ...	24.2 ...	37 ...	124 ...	213 ...	17.3
1900 ...	12157 ...	278 ...	22.8 ...	33 ...	119 ...	208 ...	17.0
1901 ...	12084 ...	301 ...	24.9 ...	30 ...	99 ...	180 ...	14.8
1902 ...	12004 ...	263 ...	21.9 ...	23 ...	84 ...	172 ...	14.3
1903 ...	11925 ...	280 ...	23.4 ...	28 ...	100 ...	169 ...	14.1
1904 ...	11846 ...	273 ...	23.0 ...	27 ...	98 ...	159 ...	13.4
1905 ...	11766 ...	275 ...	23.3 ...	30 ...	109 ...	185 ...	15.7
1906 ...	11687 ...	267 ...	22.9 ...	18 ...	67 ...	167 ...	14.3
1907 ...	11608 ...	261 ...	22.4 ...	19 ...	72 ...	165 ...	14.2
Average	—	—	—	—	—	—	—
1898-1907	11963 ...	277 ...	23.1 ...	27 ...	96 ...	178 ...	14.8
1908 ...	11528 ...	260 ...	22.5 ...	21 ...	80 ...	136 ...	11.7

CORRECTED MORTALITY—

Total deaths in district	...	...	...	...	...	...	136
Deaths of persons belonging to district in Public							
Institutions outside it	...	...	...	...	30		
Deaths of non-residents in Public Institutions in							
district	...	...	...	...	9		
Nett addition	...	...	...	...	...	...	21
							157
Corrected rate	...	...	...	...	...	...	13.1
Total deaths in public institutions in district	...	...	...	...	...	...	11

BIRTHS AND THE BIRTH-RATE.—The birth-rate for 1908 (22.5) is almost identical with that for 1907 (22.4), but was below the average for the previous ten years (23.1) and much below that of England and Wales generally for the same period (26.5).

DEATHS AND THE DEATH-RATES.—The corrected death-rate for the year is, on the other hand, below the decennial average (14.8) and is also below the average death-rate for England and Wales (14.7).

MORTALITY AT DIFFERENT AGES AND ITS CAUSES.

DEATHS IN OR BELONGING TO WHOLE DISTRICT AT SUBJOINED AGES.																																			
CAUSES OF DEATHS.		All ages.	Under 1 year.	1 and under 5.	5 and under 15.	15 and under 25.	25 and under 65.	65 and upwards.	Rodmaston	South Cerney	Coates	Dritfield	Siddington	Stratton	Baunton	Somerford Keynes	Brimpsfield	Sapperton	Kilstone	Kidgworth	Colesborne	North Cerney	Daglingworth	Duntisbourne	Fairford	Keinpsford	Poultton	Malsey Hampton	Ampney St. Peter	Ampney Crucis	Quenington	Hatherop	Rest		
Measles..	...	2..	1..	1..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	
Whooping Cough ..	...	1..	1..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	
Diphtheria ..	...	2..	0..	2..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	
Influenza ..	...	2..	0..	0..	0..	2..	0..	0..	0..	0..	0..	0..	1..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	
Diarrhoea ..	...	2..	0..	1..	0..	0..	0..	0..	0..	0..	0..	0..	1..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	
Enteritis ..	...	1..	0..	1..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	
Other septic diseases ..	...	1..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	
Phthisis ..	...	1..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	
Other tubercular diseases ..	...	6..	0..	0..	0..	2..	4..	0..	0..	0..	0..	0..	2..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	
Cancer, malignant disease ..	...	1..	0..	0..	0..	1..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	
Bronchitis ..	...	16..	0..	0..	0..	7..	9..	1..	1..	0..	1..	0..	1..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..
Pneumonia ..	...	11..	2..	1..	0..	0..	1..	7..	1..	0..	1..	1..	1..	1..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..
Pleurisy ..	...	4..	1..	0..	0..	1..	0..	2..	0..	2..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	
Cirrhosis of Liver ..	...	1..	0..	0..	0..	0..	1..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	
Premature Birth ..	...	8..	8..	0..	0..	0..	0..	0..	0..	0..	0..	0..	3..	1..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	
Heart disease ..	...	24..	0..	0..	1..	0..	4..	19..	0..	2..	0..	1..	1..	0..	1..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	
Accidents ..	...	2..	0..	0..	0..	0..	2..	0..	0..	1..	0..	1..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	
Suicide ..	...	1..	0..	0..	0..	0..	1..	0..	0..	0..	0..	1..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	
Poisoning ..	...	1..	0..	0..	0..	0..	1..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	
All other causes ..	...	70..	8..	1..	2..	2..	12..	45..	1..	5..	5..	0..	3..	2..	1..	3..	2..	1..	1..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	
All causes ..	...	157..	21..	5..	5..	6..	33..	87..	3..	12..	6..	4..	11..	8..	3..	3..	8..	5..	3..	2..	3..	5..	5..	4..	20..	8..	6..	6..	4..	3..	4..	6..	15		

Although the mortality from various causes is, on the whole, quite as satisfactory as it was in 1907, there is a slight increase in that from infectious disease, in the shape of two deaths from Diphtheria, from which there was no mortality in 1907. The deaths from Measles and Whooping Cough are identical with those of that year, as also is that from malignant disease. Phthisis has been less fatal and so also has Influenza. Enteric Fever is again absent from the list.

Almost half of the total deaths recorded were those of persons over 65 years of age.

INFANTILE MORTALITY.

CAUSES OF DEATH	Under 1 week	1 week to 1 month.	1 to 3 months.	4 to 6 months.	6 to 12 months.	Total.
Measles ...	0	0	0	0	1	1
Whooping Cough	0	0	1	0	0	1
Premature birth ...	5	1	2	0	0	8
Congenital defects	0	1	0	0	0	1
Debility	0	1	0	2	1	4
Convulsions	0	0	1	0	0	1
Bronchitis	1	0	0	0	1	2
Pneumonia	0	0	0	0	1	1
Other causes	0	0	1	0	1	2
Total ...	6	3	5	2	5	21

Total deaths from all causes—Certified 20, uncertified 1.

Births in the year—Legitimate 255, Illegitimate 5.

Deaths in the year—Legitimate infants 18, Illegitimate 3.

The above table calls for no comment: the rate, in relation to the number of births during the year, which is 80, is a little higher than that of 1907 but is considerably lower than that of England and Wales generally, which was 121.

CASES OF INFECTIOUS DISEASE NOTIFIED IN 1908.

The following table gives the cases of infectious disease notified in the district in 1908.

Cases.										Localities.												
DISEASES.	At all Ages								Anpney St. Peter	Brinsfield	Coates	Dagfinnworth	Driffild	Duntisbourne	Edgworth	Elkstone	Kemble	North Cerney	Preston	Sapperton	South Cerney	Occurred in or re- moved to Hospital.
	Under 1 year	1 and under 5	5 and under 15	15 and under 25	25 and under 65	65 and over																
Scarlet Fever	..	28	0	4	21	2	1	0	0	17	1	0	0	0	0	8	0	1	0	1	0	8
Croup & Diphtheria		10	0	1	5	1	3	0	1	0	0	0	0	1	1	3	0	0	4	0	0	5
Typhoid Fever		3	0	0	3	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	2	0
Erysipelas	..	3	0	0	0	0	2	1	0	0	1	0	1	0	0	0	1	0	0	0	0	0
Totals	..	41	0	5	29	3	6	1	1	17	2	1	1	1	1	11	1	1	4	1	2	13

The above table shows a material reduction of the cases of notifiable disease during 1908 over those of 1907 (54), which was itself below the average of the previous ten years. The predominant feature in it, as in similar records in previous years, is that of Scarlet Fever. But the number of notifications of this disease was not excessive and the type was generally very mild, none of them being fatal.

The two fatal cases of Diphtheria illustrate some points of interest in the causation of this interesting disease. One was the case of a boy, 5 years of age, living at Preston, who attended Watermoor School, to which he was conveyed daily with seven other children in a closed vehicle, and as there had been some suspicious throat cases at the school previously, he probably incurred the infection from one of these. The attack rapidly assumed a serious character, and though he was at once removed to the Isolation Hospital he succumbed a few days afterwards. His case was immediately followed by two other cases in his own family, his mother and brother, both of them of a severe type, and

by that of another child in the village, with whom he was in the habit of eating his dinner at school ; but, curiously enough, not one of the other six children, who for three days after the first suspicious symptom of the disease (sickness) exhibited itself were conveyed to school with him in a covered conveyance, was attacked. In the ordinary course of things one would have expected that some at least of these children, who had been so much exposed to the risk of infection in such an infected atmosphere as that of this closed vehicle might be reasonably supposed to be, would have accepted it. But they did not, at any rate not sufficiently to produce any overt symptoms of illness, nor did any other of the children attending Watermoor School develop the disease except the one alluded to above. One can only suppose that whilst the members of the boy's own family seem to have been specially susceptible to the infection of Diphtheria, the others who came in contact with him were more or less immune to it.

The other fatal case of Diphtheria occurred in the village of Elkstone, some months previous to the outbreak at Preston. It was that of a boy, seven years of age, who was at school on the Monday, but in consequence of complaint of headache and sore throat next day was then kept from school. As his condition became gradually more serious medical advice was called in on Friday, at 7 a.m., but he was then so ill that he could not be removed to the Isolation Hospital, and before the doctor called again at 11 a.m. the boy had passed away. A sister of this boy was attacked and also another boy who had been in communication with the lad who was first attacked, but both of these cases were promptly injected with antitoxin and recovered without any serious result.

The interest of this case, apart from the additional illustration it affords of the value of antitoxin in the treat-

ment of Diphtheria, lies in the evidence it affords of the much greater ease with which an outbreak of this disease can be arrested, when its existence is once recognised, than is practicable in the case of Scarlet Fever. The three cases of this disease in Elkstone occurred in the month of March, were promptly dealt with, and the infection was stamped out. On the other hand, Scarlet Fever first made its appearance in Brimpsfield in the end of May and after lingering there in a desultory sort of way, it got into the neighbouring parish of Elkstone in July. In one or the other of these two parishes it hung about until the end of the year, despite all efforts made to eradicate it by the closure of both schools. But it was generally of a mild type, and it was this fact that made it so difficult to get rid of it. There can be no doubt that this persistence was due to the influence of the schools in maintaining it. In very few of the cases were any insanitary conditions discovered that could have seriously influenced the spread of the disease.

The three cases notified as Typhoid Fever hardly require any notice. Two of them were children living in a farm house and the third was a resident in a large mansion. In none of these cases were the clinical symptoms of such a character as to lead to their notification, which in each case was the result of a bacteriological examination of the blood during convalescence. In one case the infection was imported from Egypt, in the other two the source of it could not be discovered.

With the exceptions above noted of Brimpsfield, Elkstone and Preston the remainder of the Rural district has been practically free from infectious disease except Measles, which has been prevalent in the parishes of Maiseyhampton, Hatherop, Winstone and Baunton, in each of which the schools had to be temporarily closed in consequence.

ISOLATION HOSPITAL.—Of the 44 cases notified during the year as suffering from infectious disease, three of which were cases of Erysipelas, 13, or nearly 33 per cent. were removed to the joint Isolation Hospital of the Urban and Rural Authorities in the district of the former of them. Of the whole number of notified cases two were fatal, both of them cases of Diphtheria, one of whom died in the hospital and the other at home. This number is much too small to allow of any comparison being instituted between the effects of home and hospital treatment.

SEWERAGE AND WATER SUPPLY.—The only new work of any importance in connection with sewerage that has been carried out during the year has been in connection with the drainage of Fairford, where the main sewer in London Street, which was only an old and defective highway drain, has been taken up and replaced by 662 feet of 6 inch stoneware pipes, provided with inspection holes and a ventilating shaft, to which all the former connections and also thirteen new ones were made.

The whole of the drainage of the town has received a good deal of attention during the year, especially the outfall works, the settling tanks having been systematically cleaned out and the filter beds renewed. MR. MATHEWS, the Sanitary Surveyor to the Council, reports that the whole system is now working satisfactorily. A complaint was received during the year from the Thames Conservancy, but it was found to be due to a purely temporary stoppage in the gas works ditch and was at once remedied. Much improvement, MR. MATHEWS states, has been effected by the cleansing of the town ditch.

Minor improvements have been effected in the sewers of Poulton, Stratton, North Cerney and Hatherop.

No work of any importance in connection with the water supply of any portion of the district has been carried out

during the year except at Coates, where an additional pump has been provided and other improvements made, at a cost of £40 in excess of the loan of £130 sanctioned by the Local Government Board, referred to in my last Annual Report.

Generally, the water supply of the district may be considered satisfactory.

ADMINISTRATION OF SPECIAL ACTS.

MILK SUPPLY.—In pursuance of a request from the Local Government Board to the District Council in the latter part of the year I made, with the assistance of MR. MATHEWS, the Sanitary Inspector for the district, a special inquiry into the accuracy of the Register of the milk suppliers of the district and into the general condition of the premises of those who were properly on the Register. It appeared on investigation that the number of names on the Register was considerably in excess of what it should be, in consequence of the retention of many who had ceased to sell milk or who, although selling milk in small quantities are not required to register. The result was to reduce the number on the Register from 101 to 56.

The general condition of the registered premises was found to be satisfactory, especially in the case of the larger farms, except in regard to the regular removal of manure from the immediate neighbourhood of the cattle sheds. In my report I pointed out the importance of facilitating this work of removal by the proper construction of the stalls and by the adoption of means for the easy transport of the manure to a sufficient distance from them to prevent possible pollution of the milk. I have referred to this subject so fully in the General Introduction to this Report that I need say nothing further on the subject here.

In order to bring all present milk sellers on the Register an advertisement was issued by the Council in the local paper calling attention to the requirements of the law in this respect.

POLLUTION OF RIVERS.—No action has required to be taken by the Council during the year under the Rivers Pollution Prevention Act, 1876, nor has any been taken against them except in the case of the Fairford Sewage to which I have referred above.

CANAL BOATS.—Although the Thames and Severn Canal passes through a portion of the district the inspection of the boats employed on it devolves more properly on the Authorities at its several ends and no occasion for separate action in this district has occurred.

HOUSING OF THE WORKING CLASSES ACTS.—As the population of the district has been for some years on the decline there is no need for any action under these Acts beyond the supervision which is well maintained over houses that show any indications of becoming uninhabitable through dilapidation. Two such houses have been voluntarily closed by their owners. Six cases of overcrowding of an occasional character have been dealt with.

FACTORIES AND WORKSHOPS ACTS.—A slight reduction has occurred in the numbers of both factories and workshops on the register. These have been regularly inspected, but no defects of any serious importance have been found in any of them.

PUBLIC HEALTH ACTS AMENDMENT ACT, 1907.—The adoption of some portions of this Act has been under the consideration of the Council, but no decision has been taken in regard to action in the matter.

NOTIFICATION OF BIRTHS ACT.—The Council have not considered that the circumstances of the district call for the adoption of this Act.

TUBERCULOSIS ORDER.—Nor have they considered it necessary to adopt compulsory notification of all cases of Tuberculosis. But they have intimated to the medical

practitioners of the district that if in any case of Phthisis which they may be attending any conditions of an insanitary character with which the Council can deal should come under their observation and they will communicate privately with me on the matter, steps will be taken to do what is practicable to deal with these conditions.

GENERAL ROUTINE OF INSPECTION.

The following summary of the routine work of inspection for the year has been presented to the Council by MR. E. J. MATHEWS, Inspector of Nuisances and Sanitary Surveyor for the district :—

HOUSE ACCOMMODATION :

Existing houses cleansed under Section 46 Public Health Act, 1875	...	...	...	0
" closed under Section 32 Housing of Working Classes Acts	...	...	...	0
" closed voluntarily	...	...	...	2
" placed in habitable repair	...	...	...	0
" overcrowded, dealt with	...	...	...	6
New houses, water certificates granted	...	...	...	13
" plans for, under bye-laws, approved	...	...	...	22

DRAINAGE :

Existing drains cleansed	...	...	...	...	11
" " repaired or re-constructed	...	...	...	...	21
Houses connected with sewers	...	...	...	...	17
Closets connected with water service	...	...	...	...	2

WATER SUPPLY :

Defective supplies improved	...	...	...	...	4
New supplies provided—					
By wells	...	...	...	...	6
By connection with water mains	...	...	...	...	5
Samples taken for examination...	...	...	...	...	1

EXCREMENT DISPOSAL :

Existing closets closed after notice	...	...	...	...	1
" repaired or re-constructed	...	...	...	...	9
Notices to empty privy vaults served	...	...	...	...	30
New earth closets, pail closets or improved privies provided	...	...	...	...	7

GENERAL NUISANCES :

Pig nuisances reported	...	...	...	...	12
Offensive refuse removed	...	...	...	...	20
" ditches cleansed	...	...	...	...	2

INFECTIOUS DISEASE :

Infectious cases visited and reported on	...	..	44
Infected houses cleansed and disinfected	...	...	30

PURVEYANCE OF FOOD :

Dairies, cowsheds and milkshops registered & inspected	...	...	55
Slaughter-houses registered and inspected	...	...	7
Bakehouses	„	„	17

FACTORIES AND WORKSHOPS ACT :

Factories registered and inspected	...	...	17
Workshops and Workplaces inspected	...	...	80
Residences of outworkers	„	...	3
No. of above employing young persons	...	...	0
Insanitary conditions dealt with not included in return of general nuisances	...	...	0

ELEMENTARY SCHOOLS :

No. in district	...	...	33
No. of insanitary conditions dealt with	...	...	3

GENERAL PROCEDURE :

No. of complaints received	...	...	12
„ notices served	...	...	120
„ statutory notices issued	...	...	1
„ summonses issued	...	...	0
„ nuisances abated without formal notice	...	...	119

The above record requires no special comment. The fact that only one statutory notice required to be issued and not a single summons might, perhaps, lead to the inference that the enforcement of the removal of nuisances was less exacting than it should be. It is well, therefore, to note that whilst the number of cautionary notices served in 1907 was 66 and the number of nuisances abated without formal notice was 57, the corresponding numbers for last year were 120 and 119 respectively.

From my own opportunities of inspecting the district I have no hesitation in saying that the efficiency with which the work of general inspection has for many years been carried on in it has been fully maintained during the past year, and that its sanitary condition will bear comparison with that of any other district of a similar character with which I am acquainted.

FRANCIS T. BOND, M.D.,

Medical Officer of Health.

CIRENCESTER

URBAN DISTRICT COUNCIL.

Extent of District: eo-extensive with the Parish of Cirencester.

Chairman of Council: E. HAYGARTH, Esq.

Sanitary Inspector and Surveyor: Mr. T. HIBBERT.

GENERAL STATISTICS.

			1891	1901	Increase	Decrease
Area (Aeres)	...	...	...2633...	5286...	2653*	—
Inhabited Houses	...	...	...1545...	1621...	76	—
Total Tenements	...	...	...1618...	1660...	42	—
Ditto of less than 5 rooms			... 728...	627...	—	101
Total Population	...	...	...7521...	7536...	15	—
Males	...	...	...3617...	3581...	—	36
Females	...	...	...3904...	3955...	51	—
Average No. of persons per house...			4·8...	4·6...	—	0·2

With reference to the decrease in the male population shown between the two censuses, notwithstanding the increase in the area of the district which took place in 1894, the explanation of this at first sight unintelligible fact is, probably, that at the time of the census of 1891 there were a number of the militia in training in the town who unduly swelled its male population.

The small increase in the female population is a better gauge of the state of things in the interval between the two censuses, especially when compared with the small increase of houses, notwithstanding the enlargement of the area of the district.

* By an Order of the Local Government Board, the Urban district of Cirencester, which previously only included a portion of the parish of the same name, was in 1894 extended to the whole of the parish. A considerable extension of the original Local Board area had taken place in 1876, but the statistics of births and deaths were not affected by it until 1877.

The considerable decrease of the tenements with less than five rooms which took place between 1891 and 1901 is a good index of the deficient house accommodation which existed at the former period and of the improvement in this respect which began to be evident at this time.

COMPARATIVE VITAL STATISTICS FOR 35 YEARS.

	1908.	Highest No. in 35 years.	Lowest ditto.
BIRTHS—	151	230 (1877) (1880)	{ 132 (1875) 142 (1907)
DEATHS—	100	207 (1878)	{ 94 (1875) (1876) (1894)
Small Pox	0	0	0
Measles	1	10	0
Scarlatina	0	4	0
Croup and Diphtheria	1	3	0
Whooping Cough	0	14	9
Fever	4	8	0
Deaths under 5 years of age ..	14	93	14
" 1 " per 1000 births	72	—*	—*

There are some numbers in the above table which require explanation.

With reference to the births, it will be seen that the highest number of births, 230, occurred in the years 1877 and 1880. Both of these years were subsequent to the extension of the boundary of the town which took place in 1876. Since then the annual number of births has been steadily, though not uninterruptedly, going down until the zero was reached in 1907, when it fell to 142. This, however, is not the lowest number in the 35 years over which the table ranges, as the births fell to 132 in 1875. But this was before the extension of the boundary, which increased the population of the Urban district from 4951 to about 7,000.

In the record of deaths from all causes it will be seen that the highest figure of mortality, 207, was in 1878, whilst the lowest, 94, is to be found in the three years 1875, 1876,

* I cannot give these figures.

and 1894. The first two of these numbers were in the pre-extension period and must, therefore, be disregarded, but I cannot find any explanation for the low mortality of 1894, which is switched in between series of years, before and after, of much higher mortality. The number is certainly correct, as in my Annual Report for that year I particularly refer to its exceptional character, for which I was then unable to offer any satisfactory explanation, as both Measles and Whooping Cough had been present during the year in an epidemic form, it being noted that both the Board and Watermoor Schools had been closed on account of this visitation.

In 1878 the exceptionally high mortality was due to the same cause, both Measles and Whooping Cough having been prevalent in a severe form and caused 24 deaths of children under five years of age, and 30 of those under one year, whilst "lung disease," which was probably inflammation of the lungs, attributable to these two diseases, accounted for eleven others. It is further stated in my Annual Report for that year, that although the mortality was most marked in infants under one year, it was not confined to children of that tender age, for 93, or nearly 45 per cent. of the total mortality was that of children under five years of age.

I have referred to this item of somewhat ancient history not only for the purpose of explaining the occurrence of the numbers referred to in the above table, but because it illustrates the influence which these two diseases exercise on mortality in early childhood. For, in all the years in which the general mortality in this district has been high it is largely due to that caused by Measles and Whooping Cough.

FLUCTUATION OF POPULATION.—During the year 1908 there were 151 births and eleven children under one year died, so that the net increase to the population, in the way

of children, was approximately 140. On the other hand, 123 deaths were registered of persons actually dying in the district, leaving a net gain to the population of 17.

Of course, this estimate takes no account of the ebb and flow of older sections of the population than infants to which only a census can give a clue.

DECENNIAL BIRTH AND DEATH RATES.

Year	Population estimated to middle of Year.	TOTAL DEATHS REGISTERED IN DISTRICT.					
		BIRTHS.		UNDER 1 YEAR.		AT ALL AGES.	
		Number.	Rate.	Number.	Rate per 1000 Births.	Number.	Rate
1898 ...	7531 ...	193 ...	25·5 ...	26 ...	134 ...	119 ...	15·7
1899 ...	7533 ...	157 ...	20·8 ...	18 ...	114 ...	131 ...	17·4
1900 ...	7534 ...	162 ...	21·5 ...	17 ...	105 ...	111 ...	14·7
1901 ...	7536 ...	175 ...	23·2 ...	17 ...	97 ...	110 ...	14·5
1902 ...	7537 ...	185 ...	24·5 ...	17 ...	92 ...	113 ...	15·0
1903 ...	7539 ...	169 ...	22·3 ...	26 ...	154 ...	115 ...	15·0
1904 ...	7540 ...	189 ...	24·9 ...	10 ...	62 ...	105 ...	13·8
1905 ...	7542 ...	190 ...	24·8 ...	13 ...	68 ...	107 ...	14·1
1906 ...	7543 ...	149 ...	19·6 ...	9 ...	60 ...	121 ...	15·9
1907 ...	7545 ...	142 ...	18·7 ...	13 ...	91 ...	128 ...	16·9
Averages							
1898-1907	7538 ...	171 ...	22·5 ...	16 ...	97 ...	116 ...	15·3
1908 ...	7546 ...	151 ...	20·0 ...	11 ...	72 ...	123 ...	16·3
CORRECTED MORTALITY—							
Total deaths in district		...	...	...	...	...	123
Deaths of non-residents in Public Institutions		...	...	...	...	...	24
Deaths of persons belonging to district in		...	...	...	...	...	1
Public Institutions outside it		...	...	...	...	...	23
Nett reduction		...	...	...	...	...	
CORRECTED DEATHS—							
Corrected rate		...	...	...	...	...	100
Total deaths in Public Institutions in district		...	...	...	...	...	56

BIRTHS AND THE BIRTH-RATE.—There has been a marked improvement in the birth-rate of this district for the past year, which, after falling suddenly in 1906 from 24·8 in 1905, with an average for the previous seven years of 23·2, to 19·6 and again in 1907 to 18·7, has now risen to 20·0. It remains to be seen whether this is merely a temporary improvement or whether the fall referred to was itself of an accidental nature. From the comparative uniformity of the birth-rate from 1898 to 1905 it would seem probable that the latter assumption is more likely to be correct.

The birth-rate for the whole of England and Wales for 1908 was 26·5. There were eleven illegitimate births in the year out of 140, or 7·1 per cent.

DEATHS AND THE DEATH-RATE.—There has also been an improvement in the death-rate for the year, which has fallen from 16·9 in 1907 to 13·2, and compares favourably with the average for England and Wales, 14·7.

The Infantile Death-rate for the year, *i.e.*, the proportion of deaths of infants under one year to the births of the year, was 72, which also compares favourably with 94 in 1907 and still more so with 121, the average infantile birth-rate for England and Wales.

There were no illegitimate deaths and only one that was not medically certified, that of a male, 74 years of age, who died “probably from heart disease.”

Four inquests were held during the year, two on deaths certified by the Coroner to have been from heart disease, one from an accident and one from suicide.

MORTALITY AT DIFFERENT AGES AND ITS CAUSES IN 1908.

DEATHS IN OR BELONGING TO WHOLE DISTRICT
AT SUBJOINED AGES.

CAUSES OF DEATHS.	All ages.	Under 1 year.	1 and under 5	5 and under 15	15 and under 25	25 and under 65	65 and upwards	Cirencester	Cottage and Infectious Diseases Hospital	Union Workhouse	Total deaths in Public Institutions in district
Measles ..	1 ..	1 ..	0 ..	0 ..	0 ..	0 ..	0 ..	1 ..	0 ..	0 ..	0 ..
Diphtheria ..	1 ..	0 ..	0 ..	1 ..	0 ..	0 ..	0 ..	1 ..	2 ..	0 ..	2 ..
Typhoid Fever ..	4 ..	0 ..	0 ..	0 ..	0 ..	0 ..	0 ..	4 ..	3 ..	0 ..	0 ..
Influenza ..	8 ..	2 ..	0 ..	0 ..	1 ..	1 ..	4 ..	8 ..	0 ..	0 ..	0 ..
Enteritis ..	1 ..	0 ..	0 ..	0 ..	0 ..	0 ..	1 ..	1 ..	0 ..	0 ..	0 ..
Septicæmia ..	0 ..	0 ..	0 ..	0 ..	0 ..	0 ..	0 ..	0 ..	0 ..	1 ..	1 ..
Phthisis ..	5 ..	0 ..	1 ..	0 ..	0 ..	4 ..	0 ..	5 ..	0 ..	4 ..	4 ..
Other tubercular disease ..	4 ..	1 ..	2 ..	0 ..	0 ..	0 ..	1 ..	4 ..	1 ..	1 ..	2 ..
Cancer, malignant disease ..	12 ..	0 ..	0 ..	0 ..	0 ..	4 ..	8 ..	12 ..	2 ..	4 ..	6 ..
Bronchitis ..	7 ..	1 ..	0 ..	0 ..	0 ..	2 ..	4 ..	7 ..	0 ..	2 ..	2 ..
Pneumonia ..	3 ..	1 ..	0 ..	0 ..	0 ..	2 ..	0 ..	3 ..	1 ..	0 ..	1 ..
Cirrhosis of Liver ..	1 ..	0 ..	0 ..	0 ..	0 ..	1 ..	0 ..	1 ..	0 ..	1 ..	1 ..
Premature Birth ..	1 ..	1 ..	0 ..	0 ..	0 ..	0 ..	0 ..	1 ..	0 ..	0 ..	0 ..
Heart Disease ..	15 ..	0 ..	0 ..	0 ..	1 ..	5 ..	9 ..	15 ..	1 ..	4 ..	5 ..
Accidents and Suicides ..	2 ..	0 ..	1 ..	0 ..	0 ..	0 ..	2 ..	2 ..	1 ..	2 ..	3 ..
All other causes ..	35 ..	4 ..	0 ..	0 ..	1 ..	12 ..	18 ..	35 ..	4 ..	22 ..	26 ..
All causes ..	100 ..	11 ..	4 ..	3 ..	3 ..	33 ..	47 ..	100 ..	14 ..	42 ..	56 ..

There is little in the foregoing table to call for special note. The deaths from Influenza were more numerous than usual, but it will be seen that they were mainly of very young or very old persons. The mortality from malignant disease was also slightly above the average, but in this case, too, it fell mostly on the age section of the population which is most liable to it. The mortality from tubercular disease was the same as in 1907 and about the average.

The following table shows the

INFANTILE MORTALITY

for the year 1908 :—

		under										
		1 mth	3 mths	6 mths	9 mths	1 year						Total
Measles	...	0	...	0	...	0	...	1	...	0	...	1
Diarrhoea	...	0	...	0	...	0	...	0	...	0	...	0
Enteritis	...	0	...	0	...	0	...	0	...	0	...	0
Premature Birth	1	...	0	...	0	...	0	...	0	...	0	1
Debility	...	0	...	0	...	1	...	0	...	0	...	1
Other tubercular diseases	...	0	...	0	...	0	...	1	...	0	...	1
Bronchitis	...	0	...	0	...	0	...	1	...	0	...	1
Pneumonia	...	0	...	0	...	0	...	1	...	1	...	1
Other causes	...	2	...	1	...	0	...	1	...	1	...	5
Total	...	3	...	1	...	1	...	4	...	2	...	11

Births in the year—Legitimate 140, Illegitimate 11

Deaths in the year—Legitimate infants 11, Illegitimate 0.

NOTIFICATIONS OF INFECTIOUS DISEASE

during the year 1908 :—

	At all Ages.	Under 1.	1 to 5.	5 to 15.	15 to 25.	25 to 65.	65 and upwards.	Removed to Hospital.
Scarlet Fever	7	0	0	3	2	2	0	5
Diphtheria	14	0	2	10	1	1	0	5
Enteric Fever	12	0	2	4	0	6	0	7
Erysipelas...	2	0	0	0	0	1	1	0
Total	35	0	4	17	3	10	1	17

Although the cases of notifiable infectious disease which have occurred during the year have not been so few as in some previous years they have been below the average. But though the total number of cases was not great the

notifications under the heads of Diphtheria and Enteric Fever gives this table more than usual interest.

The cases of Diphtheria were one more than in 1907, which was itself more than double the number notified in either of the two preceding years. They commenced in April and ceased in October.

Of the 14 cases only four were sufficiently serious or so situated as to make it desirable to remove them to the Isolation Hospital, and of these one was fatal. One was an adult female, the rest were, with one exception, that of a girl of 17, whose case was slight and not bacteriologically confirmed, all of them children, attending Lewis Lane and Watermoor Schools in about equal proportions. The first of these schools became infected from a case in the Rural district and the infection spread, I have no doubt, to the Lewis Lane School through the connection of members of infected families with these two day schools or with the Sunday schools.

The general type of the affection was mild.

Scarlet Fever, of which in 1907 there were 47 notifications, was only present in seven this year, and they were all of a mild character, but five of them were, for various reasons, removed to the Isolation Hospital.

The twelve notifications of Enteric Fever were mainly connected with two limited outbreaks, one in the Watermoor road, in the month of January, by which five persons were affected, of whom two, an adult female and her son, a boy of nine, were removed to the Isolation Hospital and died there. A daughter of this woman, a child of twelve, who was also removed to the Hospital with another girl, from a neighbouring house, recovered, as did an adult male in another house. So that the inmates of three houses were affected and all of them owed their infection to drinking water from a well which had become casually infected in consequence of a blocked house drain.

The cause of this mischief was easily detected and precautions taken to prevent the water from being drunk, so that the infection was quickly arrested, and the town water has since been laid on to these premises.

It is only right to add that there had been no illness in the row of which these three houses form part that could be attributed to polluted water ever since I have been connected with the district, no reason to suspect the wells and, therefore, no justification for enforcing the supply of the town water.

The second outbreak, which involved four persons, was of a much more obscure character. It commenced with the illness of a married woman, 31 years of age, living in a small house, of considerable antiquity, but in fairly good condition and well kept. There was no reason to suspect polluted water in this case, as very little was drunk in its unboiled state by the patient, whilst a good deal of it was consumed by neighbours who were unaffected. No other clue to the source of the infection could be discovered.

As the woman was well cared for and did not wish to be removed to the Isolation Hospital she remained at home ; but a neighbour who nursed her, and her infant child were subsequently attacked, and also, later on, the husband and infant child of the first patient, the last case, that of the husband, who remained in the house for the whole of the time, being notified two and a half months after the notification of his wife's case. None of the cases were of a severe type and all practicable precautions were observed after the first recognition of the nature of the disease, but it was considered desirable to remove the second woman and her infant child to the Hospital.

The two remaining cases of the 12 were of a much more serious nature and were both of them fatal.

One was that of a boy of 12, the son of the keeper of a public establishment, adjoining another in which a case of Enteric Fever had occurred a few months previously. In both cases the water supply was derived from shallow wells on the premises, and though there was no history of any suspicious illness in either of these households and the water of the wells involved did not give evidence of any serious pollution, there was little doubt that it was the source of the infection.

In both of these cases the town water has now been laid on.

They represent contingencies which are pretty sure to occur at one time or another from the accidental infection of the shallow wells, of which a considerable number still exist in the town. Generally, the water of these wells is free from evidence of serious contamination, as there is a copious water-bearing bed underlying the whole of the town and the flow through it is free. In such cases, therefore, it is difficult to enforce connection with the public supply. But every effort is made, whenever opportunity occurs, to point out to the occupiers and owners of houses not yet connected with the town mains the risk which is run by not doing so, and the fact that the surveyor has succeeded in making 32 new connections during the year is a proof that good progress is being made in this direction.

The last case of Enteric Fever to be referred to was that of a man, 50 years of age, in a good position. Death had occurred before I received the notification of the attack, which was of an obscure character and for which no local clue could be discovered. The infection was probably incurred outside of Cirencester and though the case was fatal, it did not spread.

Of the 35 cases notified, 17 were removed to the Isolation Hospital, viz.: Scarlet Fever 5, Diphtheria 5, and Enteric Fever 7.

ISOLATION HOSPITAL.—This is an appropriate place for referring to the Isolation Hospital which is situated in the Urban district, but is maintained jointly by the Rural and Urban Authorities.

During the year 1908 there were 30 cases removed to it, viz. : 17 from the Urban and 13 from the Rural district. This is a much smaller record than that for 1907, when 40 cases were removed to the Hospital from the Urban and 13 from the Rural district.

No alteration in or addition to the hospital has been made during the year.

As the accounts of this hospital are made out in a much more complete and intelligible form than those of any of the other Isolation Hospitals in the Combined District, so far as I have been able to learn, it may be interesting to give an abstract of the expenditure for the year ending March 31st, 1909, the materials for which have been kindly supplied to me by MR. H. ST. G. RAWLINS, the Clerk to the Cirencester Rural Council.

As the year for which these accounts are made out does not correspond with the ordinary year it would involve some trouble to ascertain from my own records how many patients were maintained in the hospital during this period, and for what period in each case. Fortunately the accounts themselves supply this information by showing for what number of days' maintenance each of the joint Authorities is chargeable. This is, in the case of the Rural Council, 575 days, Urban Council 414 days, making a total of 989 days. Assuming that each patient would have been kept in the hospital for six weeks, on an average, this number of days would represent 23·5 or say 24 patients during the year.

The following is a summary of the expenditure for the above periods :—

	£	s.	d.
Maintenance of Patients and Staff, including necessaries	104	3	11½
Furniture and Property	11	14	11
Repairs	12	11	6
Salaries and Wages, including Matron, Resident Assistant, Non-Resident Assistance, Porter (who also acts as gardener and is non-resident), Sanitary Inspector (who acts as Superintendent) and the Clerk... ..	214	11	4
Disinfectants, including antitoxin	4	6	2
Printing, Stationery and Advertising	3	19	2
Water Rent... ..	10	0	0
Petty Cash (Matron, Inspector and Clerk)	2	12	4½
Audit Stamp	2	0	0
	£365 19 5		

Dividing this expenditure amongst the 24 patients as estimated above, gives a cost of £15 5s. for each patient during the six weeks' stay, or a weekly cost of £2 5s. 3d.

In addition to the above expenditure the sum of £32 12s. 3d. was paid during the year by the Joint Hospital Committee for the upkeep of a cottage containing three beds at South Cerney, which is maintained for the purpose of meeting an outbreak of Small-pox whenever it may occur, and which has occasionally been used to receive convalescent patients from the Chesterton Hospital.

Also, there was paid by the Committee for the disinfection of houses (done by the hospital porter) at 2s. 6d. each, in both districts, £7 2s. 6d., and for conveyance of patients £9 16s., making a total of £415 10s. 2d. spent by the two Councils in the maintenance of the hospital, and in work which is done in connection with it in arresting the spread of infectious disease.

By way of further elucidation of the object on which this expenditure has been made it may be stated that the hospital itself is a stone building, of substantial but by no means recent structure. When the building was purchased by the Joint Authorities, about 35 years ago, it consisted of two cottages, which were converted, at some outlay, into the

present hospital, which has remained substantially the same ever since, although improvements have been made it in by providing better resources than it originally had for bathing, cooking and heating and for protection against fire.

Its accommodation consists of an underground basement with boiler for heating; on the ground floor are small reception room, a convalescent room, matron's sitting room, kitchen and scullery.

On the first floor, two wards of two beds each, bathroom, w.c., matron's bedroom and another. On the top floor, two wards of three beds each, and two of one bed each. The outbuildings include an ambulance shed, mortuary, and disinfecting chamber, with somewhat antiquated appliance for disinfecting by heat produced by the combustion of gas, laundry and coalhouse. There is a good garden of about one acre.

The situation of the hospital is generally good, being about one mile from the centre of the town of Cirencester, and sufficiently isolated for practical purposes, although a public pathway along the canal side runs close to it.

It has two serious defects, one is that the relations of the wards to one another and to the common staircase renders isolation of different infections difficult, if not impossible; the other is that the carriage of patients who are seriously ill into the wards or of the bodies of those who die, from them involves discomfort and difficulty.

Altogether it will be seen that though the building has done good service in its time, it is now out of all keeping with the sanitary ideas of the day and not creditable to two Authorities which are in other respects so well up to date.

The building would serve well for administrative purposes and for convalescents, but at least two good pavilion wards on the ground floor are essential to make it comparable with other isolation hospitals in the Combined District.

GENERAL ROUTINE OF INSPECTION.—The following summary of the routine work of the year has been supplied by MR. HIBBERT, the Sanitary Inspector and Surveyor for the district :—

HOUSE ACCOMMODATION :

Houses cleansed under Section 48 Public Health Act, 1875	...	...	...	...	0
„ closed and demolished	...	...	...	...	1
Common lodging houses inspected	...	...	...	...	1
„ placed in habitable repair	...	...	...	...	3
„ overcrowded, dealt with	...	...	...	...	1
New water certificates granted	...	...	...	...	0
New plans under bye-laws approved	...	...	...	...	4
Alterations and additions	...	...	...	...	22

DRAINAGE :

Existing drains cleansed	...	...	...	...	9
„ „ repaired or reconstructed	...	...	...	...	4
„ „ connected to sewers	...	...	...	...	1

WATER SUPPLY :

Defective supplies improved	...	...	...	...	0
New supplies provided—					
By connection with water mains	...	...	...	...	32
Number of wells closed for domestic purposes	...	...	...	...	16
„ samples taken for examination	...	...	...	...	12

EXCREMENT DISPOSAL :

Existing water closets repaired or reconstructed	...	...	...	...	5
No. of notices served to empty privy vaults	...	...	...	...	0
New earth closets, pail closets, or improved privies provided	...	...	...	...	0
New water closets provided	...	...	...	...	7
Cesspools cleansed and abolished	...	...	...	...	2
Scavenging regularly carried on in all parts of the town.					

GENERAL NUISANCES :

Pig nuisances reported	...	...	...	...	2
Offensive refuse removed	...	...	...	...	12
„ stable pavement remedied	...	...	...	...	1

PURVEYANCE OF FOOD :

Dairies, cowsheds and milkshops registered	...	...	...	...	15
„ „ „ inspections	...	...	...	...	18
Slaughter-houses registered	...	...	...	...	7
„ „ inspections	...	...	...	...	85
Bakehouses registered	...	...	...	...	15
„ inspections	...	...	...	...	20
Seizures of unsound food	...	...	...	...	0

FACTORIES AND WORKSHOPS ACT :

Factories, workshops and workplaces registered and inspected	...	...	...	...	...	5
Residences of outworkers	"	...	...	...	...	0
No. of above employing young persons	...	...	...	...	...	0
Insanitary conditions dealt with not included in return of general nuisances	...	..	...	...	...	0

ELEMENTARY SCHOOLS :

No. in district	...	...	...	...	...	3
Insanitary conditions dealt with	...	...	...	...	...	1
Nature of water supply—public supply	...	...	...	...	...	2
private well	...	...	...	...	...	1

GENERAL PROCEDURE :

No. of complaints received	..	...	...	...	...	23
" nuisances reported to District Council	...	...	...	...	...	50
" notices served	...	...	...	...	...	37
" statutory notices issued...	...	...	...	...	...	1
" nuisances abated without formal notice	...	...	...	...	...	6

It will be seen that, contrary to the expectations expressed in my last Annual Report, there has been very little evidence during the past year of building activity in the district. The plans for MR. BINGHAM'S new houses, which I supposed were passed in the early part of 1908, were included in the 18 which were passed in 1907. This illustrates the disadvantage, to which I have more than once referred to in my Annual Reports, of not being able to enforce the requirements of the Public Health Water Act, 1878, that before any new house is occupied the owner shall obtain a certificate that it is properly supplied with water. This provision is compulsory in Rural districts, but is not imperative in Urban districts without the sanction of the Local Government Board.

In regard to the returns under the Factories and Workshops Acts, MR. HIBBERT states that no lists of outworkers have been furnished by any employers, as they are bound to do if they do employ any, and that when questioned they state that they do not employ outworkers.

The total of 55 workshops returned above as registered and inspected is reported to be thus made up : tailoring 9,

harness making 4, millinery and dressmaking 6, cabinet making 4, ironmongery 4, coach-building 4, printing 3, sundry purposes 6, and bakehouses 15.

I have myself at different times visited some of the larger of these and especially the bakehouses, together with the registered milkshops and the slaughterhouses, and have found them generally in a satisfactory condition.

I am glad to be able to report that in this as well as in all other respects, except that of the Isolation Hospital, to which I have above alluded, the sanitary condition and administration of the district leaves little to be desired and has been as well maintained during the past year as it has been in those that have preceded it.

FRANCIS T. BOND, M.D.,

Medical Officer of Health.

The following tables were mislaid in sending the copy for the Gloucester Rural district to the printer, and are here given as an inset.

GENERAL STATISTICS.

	1891	1901	Decrease	Increase
Area in Acres	31547	30669	878	—
Inhabited Houses.. ..	1807	2062	—	255
Total Tenements	2219	2153	66	—
Ditto of less than 5 rooms	947	747	200	—
Total Population	9604	10779	—	1175
Males	4557	5081	—	524
Females	5047	5698	—	651
Average No. of persons per				
house	5.3	5.2	0.1	—

COMPARATIVE VITAL STATISTICS FOR 35 YEARS.

BIRTHS—						1908.	Highest No.	Lowest ditto.
Total	...	...	...	...	...	226	(1897) 316	(1877) 250
Ratio of Births per 1000 of population	...	...	...	...	...	19.4	26.1	25.5
DEATHS—								
Small Pox and Chicken Pox	...	...	...	...	...	0	8	0
Measles	...	...	...	...	...	0	9	0
Scarlatina	...	...	...	...	...	0	14	0
Croup and Diphtheria	...	...	...	...	...	3	21	0
Whooping Cough	...	...	...	...	...	0	7	0
Fever	...	...	...	...	...	0	6	0
Cholera, Diarrhoea and Dysentery	...	...	...	...	...	4	10	0
Puerperal Fever	...	...	...	...	...	0	—*	—
Enteritis	...	...	...	...	...	1	0	0
Other Septic Diseases	...	...	...	...	...	0	0	0
Total Deaths from Septic Diseases	...	...	...	...	...	8	33	3
Ratio per 1000 of Population	...	...	...	...	...	0	—	—
Total Deaths from all causes	...	...	...	...	...	131†	(1892) 206	(1881) 97
Ratio of Deaths per 1000 of population	...	...	...	...	...	11.2	18.2	9.3
Deaths under 5 years of age	...	...	...	...	...	29	66	15
Deaths under 1 year of age per 1000 births	...	...	...	...	...	92	—	—

* In earlier Reports this disease and Erysipelas were grouped together, and it would be difficult now to ascertain their *maxima* and *minima* for the last 35 years. I cannot give the figures for the other blank spaces.

† Exclusive of 130 deaths of persons not belonging to the district, but occurring therein, viz., in the County Asylums at Wotton and Barnwood, in Barnwood Hospital for the Insane, in the Children's Hospital, and in the City Isolation Hospital at Over; and inclusive of 14 deaths of persons belonging to the district and dying in the Infirmary and Union Workhouse situated in the City of Gloucester.

GLOUCESTER

RURAL DISTRICT COUNCIL.

Composition of District: Parishes (23) of Highnam, Lassington, Maisemore, Ashleworth, Sandhurst, Norton, Down Hatherley, Churchdown, Barnwood, Hempsted, Matson, Upton St. Leonards, Prinknash, Brockworth, Whaddon, Quedgeley, Twigworth, Tuffley, Hucclecote, Elmore, Wotton St. Mary (Without) and Wotton Vill.

Chairman of Council: W. PRIDAY, ESQ.

Sanitary Inspector and Surveyor: Mr. F. WEAVER, Lansdown Road, Gloucester.

With reference to the above statement of the composition of this district it may be well to give the following information in regard to it :—

The Civil Parish of Prinknash, which at the census of 1881 consisted of one house with 22 inmates, had in 1891 increased to three houses with 14 inmates, but in 1901 was reduced to two houses with seven inmates.

The Civil Parish of Wotton Vill is formed entirely by the Wotton Division of the County Lunatic Asylum, which in 1871 contained 512 inmates; in 1881 it had 541 inmates; in 1891 it had 696 inmates; and in 1901 its inmates had increased to 778.*

The Civil Parish of Barnwood includes the Second Division of the County Asylum which in 1881 had only 12 inmates, including officials; in 1891 the inmates had increased to 436, and in 1901 to 476.

* I have endeavoured to check these numbers which I have extracted from the census reports by information which has been kindly supplied to me by Dr. R. B. Smyth, the present Medical Superintendent of the County Asylum, and who gives as the inmates for the several census years which he has extracted from old reports of the daily average number of inmates, including officials, as the above numbers also do, the following numbers: 1871—599; 1881—685; 1891—1006; 1901—1072. Neither I nor Dr. Smyth can explain these discrepancies.

The Parish of Barnwood also includes Barnwood House Lunatic Hospital, which in 1881 had 161 inmates. In 1891 these had increased to 206 and in 1901 to 218.

The Civil Parish of Longford contains St. Lucy's Hospital for Children, which in 1882 had 39 inmates; in 1891 it had 38 inmates, and in 1901 it had 40 inmates.

To these public institutions in the Rural District has been added since the Census of 1901 the Urban Isolation Hospital, in the Parish of Highnam and Over, and the Small-pox Hospital in the Parish of Longford, the inmates of neither of which have as yet been returned under a Census, and are inconsiderable.

It will thus appear that out of the population of 10,779 persons attributed to the Gloucester Rural district at the Census of 1901 at least 1,500, or more than 13 per cent., were lunatics or sick children, brought into the district, but having in most cases no residential connection with it.

The lunatic portion of this section of the population has grown from 912 in 1881 to at least 1,472 in 1901, and forms an element which is almost entirely valueless for any reproductive purpose, and which, therefore, disturbs seriously any estimate of the birth-rate of the district during the inter-census period, and to some extent also that of the death-rate, since the viability of this section of the population is less than that of an average population and considerably less than that of an average rural population. It represents a dead weight imposed upon the vital statistics of the district, the precise effect of which cannot be easily estimated.

FLUCTUATION OF THE POPULATION.—But apart from this disturbing influence in working out the vital statistics of the district, there is another of greater weight still in the variations of area and population which it has undergone during the last 30 years.

These may be briefly stated as follows :—

At the date of the Census of 1871 the Gloucester Rural District (which was not actually created as such until 1872) was estimated, by the Registrar General, to have a population of 9797.

But in the year 1874 an extension of the City of Gloucester took place by which portions of the Rural district, consisting of parts of the South Hamlet and Wotton St. Mary and Kingsholm St. Mary, were absorbed into the City.

What was the precise amount of the population thus transferred from the Rural to the Urban district it is difficult to discover. The Census Report of 1881 is silent on the subject.

But notwithstanding the loss thus sustained, which must have been considerable, the population of the diminished district was shown by the Census of 1881 to be 10,339, giving an increase of 542.

In the Census Report for 1891 this estimate is corrected by giving the population of the district in 1881 as 10,395, and the increase, therefore, became 598. How much of this increase was due to increase of lunatics during the inter-census period of 1871-81 I am unable to say as the Report of 1881 gives no means of comparison and I have not the Census Report of 1871 at hand to elucidate the point.

No alteration of the area of the Rural district took place between the Censuses of 1881 and 1891, in the Report for which latter the population of the Rural district is given as 11,463, and the increase in the population was consequently 1,068, or more than nine per cent.

The Census of 1891 therefore showed that the rate of increase of the population of the Rural district between 1881 and 1891 had apparently been nearly double what it was assumed to have been between 1871 and 1881, and all the estimates of birth and death-rates made during the

former of these periods were correspondingly vitiated and had to be corrected.

In 1894, an enlargement of the area of the City of Gloucester was effected by the Gloucester Corporation Act of that year by which the whole of the City was made a single parish, and the Municipal and Parliamentary boundaries were made conterminous.

No serious disturbance of the population of the Rural district, if any, appears to have been made by this extension, but in 1900 a very large slice was taken from it by the Order of the Local Government Board of November in that year, including portions of the Civil Parishes of Barnwood, Hempstead, Matson, Tuffley and Upton St. Leonards in the Urban district. The population of the portion thus subtracted appears by the Census Report for 1901 to have been 2,727.

Had the district remained unaltered the apparent rate of increase of the population, estimated by the rate of increase between 1881 and 1891, would have brought it up to 12,533. But, as a matter of fact, the Census Report of the latter of these years gives it as 10,779, or a difference of 1,754, which would have justified basing the annual increment for the years subsequent to 1901 at 1754.

The reduction of the population of the diminished district to 10,896 involves a corresponding reduction of the previously assumed population at the Census of 1891 from 11,463 to 9,604, or a difference of 1,856.

The difference, therefore, between the assumed population of the district in 1891, viz., 9,604, and the actual population of 10,779 in 1901, viz., an increase of 1,175, allows the assumption of an annual increase for each year subsequent to 1901 of 117.5, and upon this estimate I have based the birth and death-rates for the last seven years.

I have thought it well to state the foregoing facts, not only because they are necessary to explain the large drop in the population of the district which is shown in the Table of Decennial Birth and Death-Rates, but because they give some idea of the difficulties involved in estimating these rates correctly in such a district as this.

PAROCHIAL FLUCTUATIONS.—In addition to the general fluctuations which have taken place in the population of the district as a whole since 1871, there have been also variations in the population of the different parishes in it.

As these fluctuations indicate pretty accurately the differences between different parts of the district in regard to their rural and semi-urban character, I have thought it worth while to give the following summary of them :—

I. Parishes with less population in 1901 than in 1871 :—

	1871	Census		1901	Shrinkage	Percent. of
		1881	1891		in 30 years	Original Population
Prinknash Park ...	14	22	14	7	7	50
Twigworth ...	188	182	209	180	8	42
Sandhurst ...	602	451	438	409	193	32
Highnam, Linton and Over ...	385	354	313	276	109	28
Ashleworth ...	564	501	450	410	154	27
Lassington ...	75	62	57	57	18	23
Brockworth ...	489	445	411	373	106	22
Norton ...	430	429	354	377	53	12
Down Hatherley ...	194	193	172	184	10	5
Maisemore ...	484	491	440	465	19	4

All of these parishes are strictly rural and form no part of the suburbs of the City of Gloucester, except Sandhurst, which has a small suburban portion. The fluctuations of Prinknash Park are obviously entirely accidental.

Then come five parishes which have materially increased their population, *viz.* : Churchdown, Barnwood, Hucclecote, Longford and Tuffley. Two of these, Churchdown and Hucclecote, have undergone no change of area. Barnwood lost a small portion of its area in 1900, but its increase in spite of that has been due partly to the increase of the lunatic residents, in the two asylums which it contains, though in a much larger degree to the fact that it is the

suburb of Gloucester which has, until the last few years, offered the best facilities for the erection of good middle-class houses. In this respect Hucclecote is now running it hard, and there is no doubt that the population of this latter parish will show a considerable increase at the next Census. But the parish which shows the largest increase during the 20 or more years that it has had a separate existence is Wotton St. Mary Without, as might be expected from its nearness to the City and from the large number of small houses which have been erected in some parts of it. Prior to 1881 it was included in the Census returns of the larger parish of Wotton St. Mary.

II. Parishes which have increased more or less steadily within the last 30 years :—

			Census 1871	1881	1891	1901	Increase	Per cent.
Wotton St. Mary Without...	—		—	461	538	906	445	96
Barnwood	...	...	629	761	1135	1184	555	88
				829	1462			
Churchdown	...	...	621	686	750	989	368	59
Hucclecote	...	...	429	453	459	671	242	56
Longford	...	...	—	562	521	673	111	20

The present parish of Longford was constituted in 1874 out of the parishes of Longford St. Mary and Longford St. Catherine.

Lastly, there are seven parishes which from the changes that have taken place in their relations to other parishes and the fluctuations in their population caused thereby, cannot with certainty be placed in either of the above categories. They are as follows :—

			Census 1871	1881	1891	1901	Increase.	Decrease.
Whaddon	...	...	127	111	106	371	144	—
					226			
Elmore	...	...	373	352	430	372	1	—
				429				
Hempstead	...	...	224	372	408	408	184	—
				402	422			
Matson	...	...	24	32	52	50	26	—
				94	120			
Quedgley	...	...	464	463	476	639	175	—
				474	550			
Upton St. Leonards ...	...	1309	1309	1430	981	1000	—	309
				1509	1666			
Tufley	...	...	196	373	196	256	60	—
				256	872			
Wotton Vill	...	...	512	541	696	778	266	(52 per cent.)

Subject to the foregoing reservations I have given in the following table the comparison which I have been in the habit of showing in my Annual Reports for all the separate districts of the Gloucestershire Combination, for many years, between the births, deaths and mortality from septic diseases for the current year and the maximum and minimum numbers for the period during which I have been connected with the district. This comparison, when combined with the bird's-eye view of the fluctuations of mortality from the more serious forms of septic disease, as shown in the chart at the commencement of the General Report will give, if not an absolutely precise, at any rate, a fairly correct idea of the improvement of the public health in the different districts during the above period.

DECENNIAL BIRTH AND DEATH RATES.

The relations of these rates and of the infants' death-rate are shown in the following table :—

		TOTAL DEATHS REGISTERED IN DISTRICT.											Corrected Rate.			
		BIRTHS.			UNDER 1 YEAR.				AT ALL AGES.							
					Rate per 1000 Births.											
Year.	Population estimated to middle of Year.	Number.	Rate.	Number.				Number.	Rate.							
1898	...	12212	...	289	...	23·6	...	37	..	132	...	261	...	21·3	...	10·8
1899	...	12319	...	307	..	25·1	...	31	...	100	...	277	...	22·9	...	10·2
1900	...	12406	...	290	...	23·7	...	25	...	86	...	247	...	19·9	...	10·6
1901	..	10779	...	229	...	21·2	...	21	...	91	...	257	..	21·8	...	16·1
1902	...	10896	..	213	...	19·5	...	28	...	131	...	264	...	24·2	...	11·5
1903	...	11014	..	207	...	18·7	...	17	...	81	...	251	...	22·7	...	11·0
1904	...	11131	...	214	...	19·1	...	15	...	70	...	273	...	24·5	...	10·2
1905	...	11249	...	234	...	20·8	...	21	...	89	...	270	...	24·0	...	11·1
1906	...	11366	...	220	...	19·3	...	14	...	63	...	265	...	23·3	...	10·9
1907	...	11484	...	221	...	19·2	...	14	...	63	...	259	...	21·6	...	12·5
Average		-----	-----	-----	-----			-----			-----			-----		-----
1898-1907		11847	...	242	...	20·3	...	22	...	90	...	262	...	20·8	...	11·4
		-----	-----	-----	-----			-----			-----			-----		-----
1908	...	11602	...	226	...	19·4	...	21	...	92	...	250	..	21·5	...	11·2

CORRECTED MORTALITY :—

Total deaths registered in district	...	...	...	...	250
Deaths of non-residents in Public Institutions in district	...	...	...	...	130
Deaths of non-residents, but not in Public Institutions	...	...	...	...	3
Deaths of persons belonging to district in Public Institutions outside it	...	...	...	...	14
Nett reductions	...	...	...	...	119
					—
Corrected deaths	...	...	...	...	131
Corrected rate	...	...	...	...	11.2
Total deaths in Public Institutions in district	...	...	...	...	135

BIRTHS AND THE BIRTH-RATE.—The birth-rate of the year, 19.4, though a trifle higher than that of the two preceding years, is still below the average of the decennium, 20.3, and much below that of England and Wales generally, 26.5.

This is due to several causes, especially to the large unprolific element of the population of the district in the shape of its lunatic members and elderly residents in the Rural parishes. Apart from the comparatively small number of agricultural labourers between the ages of 25 and 55, the working class element of the district is confined to what exists in Wotton Without. Of the 226 births two were illegitimate.

DEATHS AND THE DEATH-RATE.—The corrected death-rate for the year 1908 is 11.2, which is almost the same as the average for the previous ten years, 11.4, and compares favourably with that of England and Wales generally, 14.7.

INFANTILE DEATH-RATE.—The deaths of children under one year, which during the two previous years had fallen to the extremely low level of 63 per thousand births, just about half that of the average of England and Wales, rose in 1908

to 92 per thousand births or a trifle over the average for the decennial period, which was materially raised by excessively high death-rates in the years 1898 and 1902.

The following table gives the ages and causes of the 21 deaths under one year :—

INFANTILE MORTALITY.

for the year 1908 :—

	1 week	2 weeks	1 month	2 to 3 months	Under 6 months	9 months	1 year	Total
Diarrhœa	.. 0	... 0	... 1	... 1	... 0	... 0	... 0	2
Enteritis	... 0	... 0	... 0	... 1	... 0	... 0	... 0	1
Premature birth	2	... 0	... 0	... 0	... 0	... 0	... 0	2
Congenital defects	1	... 0	... 0	... 0	... 0	... 0	... 0	1
Atrophy	... 1	... 2	... 2	... 1	... 0	... 0	... 0	6
Convulsions	... 1	... 0	... 0	... 0	... 0	... 0	... 0	1
Bronchitis	... 0	... 0	... 2	... 1	... 0	... 0	... 0	3
Pneumonia	... 0	... 0	... 0	... 0	... 1	... 0	... 0	1
Suffocation	... 0	... 0	... 0	... 1	... 0	... 0	... 0	1
Other causes	... 2	... 0	... 0	... 1	... 0	... 0	... 0	3
Total	... 7	... 2	... 5	... 6	... 1	... 0	... 0	21

Births in the year—Legitimate 224, Illegitimate 2.

Deaths in the year—Certified 20, Uncertified 1.

Amongst the general mortality for the year was one death, that of a female who was certified to be 102 years old.

Eighteen inquests were held during the year, of which two were on infants, one a suicide, one caused by a railway accident and one by a bicycle.

Four deaths were uncertified.

The only deaths in the foregoing table that call for any notice are the three from Diphtheria. They were all under six years of age, in different parts of the district and at different periods of the year.

INFECTIOUS ILLNESS

notified during the year is shown in the following table :—

Cases notified in District.								Cases Notified in Special Localities															Occurred in Hospital Removed to Hospital		
DISEASES.	All Ages	Under 1 year	1 and under 5	5 and under 15	15 and under 25	25 and under 65	65 and upwards	Longford County Asylum, Wotton	Hempsted	Elmore	Twigworth	Longlevens	Tuffey	Churchdown	Quedgeley Upton St.	Leonards Norton	Child's Hosp'l, Kingsholm	Barnwood	Brockworth	Sandhurst	DownHatherley				
Diphtheria ..	39	1	8	26	2	2	0	8	1	1	0	5	4	0	0	0	0	9	2	2	1	3	3	2	1
Erysipelas ..	6	1	0	0	0	4	1	0	1	1	0	0	0	1	1	0	1	0	0	0	0	0	0	0	0
Scarlet Fever	16	0	2	13	1	0	0	0	0	3	3	1	2	2	0	4	1	0	0	0	0	0	0	0	2
Enteric Fever	6	0	0	0	0	6	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals ..	67	2	10	39	3	12	1	8	8	5	3	6	6	3	1	4	2	10	2	2	1	3	3	2	3

It will be seen from the above table that there was a considerable prevalence of Diphtheria during the past year, but that with the exception of Longford and Norton the cases in the other nine parishes in which it occurred were very few. One case was removed to the Over Hospital.

The larger number of cases in these two parishes and the five at Twigworth were probably an extension of the outbreak which occurred in the parish of Down Hatherley during 1907.

The two cases which are stated in the table to have been in hospital occurred in the Children's Hospital at Longford, which is in the Gloucester Rural district, but they were Urban cases.

All the six cases of Enteric Fever occurred in the Wotton County Asylum, but none of them were fatal.

The 16 cases of Scarlet Fever were all of a mild type, but it was considered desirable to remove two of them to the hospital at Over, belonging to the Gloucester Urban Council.

SEWERAGE AND WATER SUPPLY.—No work of any importance has been done by the District Council during the past year.

The sewers in the North End district have continued to act satisfactorily, and the Surveyor reports that 50 houses have been connected with them during the year.

The outfall works, at Longford, have also been conducted without any complaint of nuisance from them. Mr. Weaver, the Manager of the Works, reports that the cost of them during the year has been £144 18s. 3d., and that £11 15s. 6d. has been received for sludge and produce.

The only part of the district in which a practically unlimited supply of water is available is the North End Sewage Area, through the greater part of which the City mains pass.

During the year 49 connections have been made with this service.

The villages of Matson and Upton St. Leonards have a partial water supply by pipes, which is efficient, so far as it goes.

POLLUTION OF THE WOTTON BROOK.—The nuisance arising from houses in the City area allowing their sewage to escape into the Wotton Brook, to which I referred at some length in my last Annual Report, continues *in statu quo*. Correspondence has been going on between the Urban and Rural Councils on the subject, but no agreement has been come to.

PUBLIC HEALTH ACTS AMENDMENT ACT (1907).—In the earlier portion of the year the Council appointed a Committee to consider and report on the propriety of adopting

this Act. In the month of July the Committee presented a report on the subject, which, after considerable discussion on it, was referred back to them for further consideration, since which no further action has been taken.

SCAVENGING.—The subject of scavenging both of liquid (cesspool) and solid refuse has occupied the attention of the Council during the year.

In regard to the former of these procedures the question was mooted more particularly with regard to the needs of the village of Churchdown, and a Committee was appointed to inquire into and report on methods of emptying private cesspools by methodic processes conducted under the supervision of the Local Authority.

The inquiry practically resolved itself into one on the success of appliances manufactured by a well-known hydraulic firm for this purpose, and the evidence collected by the Committee showed that the method of pneumatic exhaustion of cesspools by pumping, though of long standing in France, under the name of the Lienur system, has only been adopted by a few authorities in this country, the evidence from which is somewhat conflicting.

There is no doubt as to the practicability of the system or that it can be carried on without any serious nuisance ; but it is an expensive one, on account of the cost of the appliances and the labour involved in working them, and is only applicable, on that account, in a well-populated district, where a sewerage system is attended with special difficulties and where the rateable value of the property is such as to justify the outlay.

The propriety of providing systematic scavenging of house refuse for the urban portion of the parish of Wotton St. Mary has been under the consideration of the Council, but no decision has yet been come to on the subject.

GENERAL ROUTINE OF INSPECTION.—The following summary of the routine work of inspection during the past year is supplied by MR. F. WEAVER, the Sanitary and Building Inspector, as well as the Surveyor of Highways, for the Rural district.

HOUSE ACCOMMODATION :

Existing houses demolished	...	...	...	...	0
" closed	..	...	...	...	1
" overcrowded, dealt with	...	...	...	...	2
New houses, water certificates granted	...	...	...	...	44
" plans for, under bye-laws, approved	...	...	...	...	76
Alterations and additions	...	...	...	...	3

DRAINAGE :

Existing drains cleansed	...	...	...	...	10
" " repaired or re-constructed	...	...	...	...	2
Houses connected with sewers	...	...	...	...	50
Closets connected with water service	...	...	...	...	49

WATER SUPPLY :

Defective supplies improved	...	...	...	...	12
New supplies provided—					
By wells	...	...	...	...	0
By connection with water mains	...	...	...	...	49
No. of wells closed	...	...	...	...	1
Samples taken for examination...	...	...	...	...	0

EXCREMENT DISPOSAL :

Existing closets closed after notice	...	...	...	...	1
" repaired or re-constructed	...	...	...	...	4
Notices to empty privy vaults served	...	...	...	...	10
New earth closets, pail closets or improved privies provided	..	...	...	...	2

GENERAL NUISANCES :

Pig nuisances reported	...	...	...	...	7
Offensive refuse removed	...	...	...	...	1
,, ditches cleansed	...	...	...	...	16

INFECTIOUS DISEASE :

Infectious cases visited and reported on	...	..	...	...	62
Infected houses cleansed and disinfected	...	...	...	...	36

PURVEYANCE OF FOOD :

Dairies, cowsheds and milkshops registered & inspected	63
Slaughter-houses registered and inspected	1
Bakelhouses	14

FACTORIES AND WORKSHOPS ACT :

Factories registered and inspected	...	...	...	7
Workshops and Workplaces inspected	...	...	...	43
Residences of outworkers	„	...	...	6
No. of above employing young persons	...	...	...	0
Insanitary conditions dealt with not included in return of general nuisances	...	...	...	10

ELEMENTARY SCHOOLS :

No. in district	...	...	...	...	...	...	17
Nature of water supply	and whether satisfactory						
or not.—15 supplied	by wells and 2 service laid						
on from main.							Satisfactory

GENERAL PROCEDURE :

No. of complaints received	...	...	...	...	15
„ notices served	...	...	...	...	43
„ statutory notices issued		...	...	...	20
„ summonses issued	...	...	...	...	0
„ nuisances abated without formal notice				...	14

The most noteworthy feature in the above summary is the evidence afforded of increased house accommodation in the district by the number of water certificates granted for new houses occupied and of plans for new buildings approved.

The relatively large number of houses connected with sewers and water supply in the North End drainage area has been already referred to.

The discrepancy between the number of cases of infectious disease notified and of houses cleansed and disinfected, is accounted for by the fact that they were either cases of ordinary Erysipelas or of cases occurring in public institutions in the district which undertake their own disinfection.

The number of registered milk sellers has diminished by 20 from that recorded in my Annual Report for 1907. This is accounted for by a number of persons having been

taken off the Register who were no longer required to be on it. The general conditions under which milk is produced on these premises is distinctly improving.

Some complaints have been received of nuisance from both of the knackers' premises which have for some time existed in the district. One of them has now been closed and the other is under notice from the Council that the licence may possibly not be renewed.

The number of workshops and workplaces under inspection has increased from 28 in 1907, to 43. No serious sanitary defects were found in any of these, and no action was required for abating those which were discovered beyond formal notice.

In other respects the Summary calls for no special comment.

The above record of work done in the removal of nuisances and in the maintenance of the public health is as satisfactory as it has generally been in previous years.

FRANCIS T. BOND, M.D., Lond.,

Medical Officer of Health.

LYDNEY RURAL DISTRICT COUNCIL.

Composition of District: The Parishes of Lydney, Aylburton, Alvington, St. Briavels, Hewelsfield, Lancaut, Tidenham, and Woolaston.

Chairman of Council: JAMES LAUDER, Esq.

Sanitary Inspector: Mr. G. J. ELLIOTT, Lydney.

This district consists of the Gloucestershire portion of the Chepstow Poor Law Union, which was separated from the remainder of that Union for sanitary purposes in 1894.

GENERAL STATISTICS.

			1891	1901	Increase	Decrease
Area—acres	...	...	24634	24634	—	—
Inhabited Houses	...	...	1693	1867	174	—
Total Tenements	...	...	1766	1908	142	—
Ditto of less than 5 rooms	...	...	974	811	—	163
Total Population	...	...	8153	8649	496	—
Males	...	...	4062	4291	229	—
Females	...	...	4091	4358	267	—
Average No. of persons per						
house	...	...	4.8	4.6	—	0.2

COMPARATIVE VITAL STATISTICS FOR 15 YEARS.

BIRTHS—						1908.	Highest No. in 15 years.	Lowest ditto.	
Males	...	...	...	...	...	127	139	99	
Females	...	...	..	...	...	111	135	106	
Total	...	...	...	...	...	238	265	211	
Ratio of Births per 1000 of population						...	26.4 (1902)	30.4 (1907)	23.5
DEATHS—									
Small Pox	...	...	...	...	..	0	0	0	
Measles	...	...	...	...	...	0	4	0	
Scarlatina	...	...	..	...	...	0	1	0	
Croup and Diphtheria	..	...	...	...	...	0	9	0	
Whooping Cough	...	...	...	..	.	1	7	0	
Continued Fever	...	...	...	...	...	0	8	0	
Cholera, Diarrhœa and Dysentery	..	...	...	...	...	1	5	0	
Enteritis	...	...	...	...	...	1	—*	—*	
Puerperal Fever	...	...	...	...	...	0	1	0	
Erysipelas	...	...	...	...	...	0	1	0	
Other Septic Diseases	...	...	...	...	...	0	—*	—*	
Total Deaths from Septic Diseases	...	...	...	...	...	3	—*	—*	
Ratio per 1000 of population						...	0.3	1.6	0.45
Total Deaths from all causes						...	103	133	98
Ratio of Deaths per 1000 of population						...	11.4 (1904)	15.1 (1899) (1900)	11.3
Deaths under 5 years of age						...	17	43	23
" " 1 year " per 1000 births						...	63	138	63

* I am unable to give these figures.

DECENNIAL BIRTH AND DEATH RATES.

Year.	Population estimated to middle of Year.	TOTAL DEATHS REGISTERED IN DISTRICT.						Corrected	
		BIRTHS.		UNDER 1 YEAR.		AT ALL AGES.			Mortality
		Number.	Rate.	Number.	Rate per 1000 Births.	Number.	Rate.		
1898	8490	256	30.1	29	113	108	12.7	—	*
1899	8543	247	28.9	29	117	126	14.7	—	—
1900	8595	234	27.2	19	81	98	11.4	—	—
1901	8650	261	30.1	19	72	114	13.1	—	—
1902	8703	265	30.4	23	87	128	14.7	—	—
1903	8756	247	28.2	27	109	126	14.3	—	—
1904	8809	237	26.9	31	135	133	15.0	—	—
1905	8859	253	28.8	21	83	129	14.5	—	—
1906	8912	231	25.9	24	103	114	12.7	128	14
1907	8946	211	23.5	23	109	106	11.8	125	13
Average	—	—	—	—	—	—	—	—	—
1898-1907	8721	244	27.9	24	100	118	13.5	—	—
1908	8996	233	26.4	15	63	92	10.2	103	11

* I am unable to give the corrected death-rates for the years prior to 1905, for, though the were estimated at the time, the records have been accidentally destroyed.

CORRECTED MORTALITY—

Total deaths in district for 1908	...	...	...	...	...	...	...	92
Deaths of persons belonging to district in Public Institutions outside it	..	...	...	...	...	...	12	
Deaths of non-residents in Public Institutions in district	...	...	..	...	...	...	1	
Net addition	...	...	...	...	...	...	...	11
								103
Corrected rate	...	...	...	...	...	...	...	11.4
Total deaths in Public Institutions in district	...	...	...	...	...	...	...	1

BIRTHS AND THE BIRTH-RATE.—The birth-rate for 1908 (26.4) has recovered from the fall which it exhibited in the two previous years, though it is not as high as the average of the previous ten years. But it is almost identical with that of England and Wales for the year (26.5).

Amongst the 238 births registered were nine illegitimates.

DEATHS AND THE DEATH-RATE.—The corrected death-rate for the past year (11.4) is below that of 1907 (13.0), and still more so below that of England and Wales (14.7).

There were three uncertified deaths, all of them infants, one, aged four months, from “Convulsions,” at Lydney, one, aged one month from “Pneumonia,” at Woolaston, and one, aged two hours, from “Syncope,” at Tidenham.

There were seven inquests held during the year, all of them on adults, two on suicides and the other five on deaths from ordinary causes.

Of the 15 infantile deaths, one was illegitimate.

The following table gives the

INFANTILE MORTALITY AND ITS CAUSES.

CAUSES OF DEATH	Under 1 week	Under 1 month.	Under 2 months.	Under 3 months.	Under 5 months.	Under 7 months.	Under 8 months.	Under 9 months	Under 10 months	Total.
Premature Birth	1...	0...	0...	0...	0...	0...	0...	0...	0...	1
Congenital Defects...	0...	0...	0...	1...	0...	0...	0...	0...	0...	1
Atrophy	1...	0..	1..	0...	0...	1..	0...	0...	1...	4
Convulsions	...	0..	0...	1...	0...	1..	0...	0...	0...	2
Pneumonia.	...	0..	1...	1...	0...	0..	1..	1..	0...	4
Other Causes	3...	0..	0...	0..	0...	0...	0...	0...	0..	3
Total	5..	1...	3..	1..	1...	1...	1...	1...	1..	15

The foregoing 15 deaths when compared with the total number of births for the year (238) give a rate of 63 per 1000 births, which compares very favourably with that of England and Wales (121).

MORTALITY AT ALL AGES AND ITS CAUSES.

The following table exhibits the principal causes of death during the year 1908, and the ages at which they have occurred :—

CAUSES OF DEATH.	All ages	Under 1 year	1 and under 5	5 and under 15	15 and under 25	25 and under 65	65 and upwards	Lydney	St. Briavels	Woolaston	Tidenham	Aylburton	Hewelsfield	Alvington	Chepstow Workhouse	Public Institutions in District
Whooping Cough	1..	0..	0..	1..	0..	0..	0	1	0	..0	..0	..0	..0	..0	0	0
Influenza	..	7..	0..	0..	0..	2..	0..	2..	1	..0	..3	..0	..0	..0	1	0
Enteritis	..	1..	0..	1..	0..	0..	0	1..	0	..0	0	..0	..0	..0	0	0
Diarrhoea	..	1..	0..	0..	0..	0	1	1..	0	..0	..0	..0	0	0	0	0
Phthisis	..	14..	0..	0..	1..	1	..12..	5..	1	..1	..1	..2	..1	..1	2	0
Cancer, malignant disease	..	1..	0..	0..	0	..	0..	1..	0	..0	..0	..0	..0	..0	0	0
Bronchitis	..	6..	1..	0	..	0..	0..	0..	3	..0	..2	0	..0	..0	1	0
Pneumonia	..	8..	4..	1..	0..	0..	1	3..	0	..1	..2	..2	..0	..0	0	0
Pleurisy	..	1..	0..	0..	0..	0..	1..	0..	0	..0	..0	..0	..0	0	1	0
Alcoholism	..	1..	0..	0..	0..	0..	1	0	0	..0	..0	..0	..0	..1	0	0
Premature Birth	1..	1..	0..	0..	0..	0..	0	0..	0	..0	..0	..1	..0	..0	0	0
Accidents	..	1..	0..	0	..	0..	1..	0..	0	..0	0	..0	..0	..1	0	0
Suicides	..	2..	0..	0..	0	..	2..	1..	0	..0	..0	..0	..0	..1	0	0
Heart Disease	..	13..	0..	0..	1..	0..	4..	4..	2	..1	..3	..0	..0	..2	1	0
All other causes	45..	9	..	0..	1..	1	..15..	12..	6	..2	..11..	5	..4	..1	4	0
All causes	103	..15..	2..	4..	5	..36..	41	31	..13	..5	..22	..10..	5	..7	..10	0

It will be observed from the above table that the mortality from the notifiable diseases has been *nil* during the past year, and that the deaths from ordinary infectious but non-notifiable disease have been confined to one from Whooping Cough.

The deaths from Influenza have again this year been relatively high, being seven, as they were in 1907.

The least satisfactory feature of the table is the unusually high mortality from Phthisis (Consumption).

This excess can be best appreciated by setting out the mortality from this disease during the last 14 years in this district, *i.e.*, since it was formed in 1894.

MORTALITY FROM PHTHISIS IN 14 YEARS.

Deaths		Deaths		Deaths		Deaths
1895—2	...	1896—8	...	1900—5	...	1905—7
		1897—6	...	1901—5	—	1906...8
		1898—8	...	1902—4	...	1907—8
		1899—7	...	1903—3	...	1908—14
				1904—2		
		— —		— —		— —
Average		7·25		3·75		9·25

The above table shows that in the last 14 years there has been a rather curious oscillation in the deaths in the Lydney district from Phthisis. The whole period obviously divides itself into four sub-periods, two of which are of four years and exhibit a maximum mortality from Phthisis, with an intermediate one of slightly longer duration in which the mortality was only about half of what it was in the other two periods, while in the fourth period, of only one year, there were only two deaths from this disease.

It is difficult to suggest an explanation of this apparently cyclical prevalence of the disease, especially as the numbers cover a district the conditions of which vary considerably both physically and socially. The numbers are small and it is possible that the fluctuation may be accidental.

With the view of seeing whether there is anything in the age, sex, occupation or residence of the 14 persons whose deaths from Phthisis are recorded during the past year, to explain its unusual prevalence, I give on the following page a table in which these conditions are shown.

Table showing the Sex, Age, Occupation and Residence of the 14 persons who died from Phthisis in the Lydney Rural District in 1908.

	Sex	Age	Occupation	Residence
1	M ...	35 ...	Pharmaceutical Chemist ...	St. Briavels
2	F ...	14 ...	None ...	Lydney
3	F ...	27 ...	Domestic Servant ...	Aylburton
4	M ...	48 ...	Farmer ...	Lydney
5	M ...	35 ...	Farm Labourer ...	Alvington
6	F ...	31 ...	Married Woman ...	Lydney
7	F ...	51 ...	Married Woman ...	Lydney
8	F ...	27 ...	Dressmaker ...	Tidenham
9	F ...	32 ...	Married Woman ...	Woolaston
10	M ...	46 ...	Collier ...	Lydney
11	M ...	24 ...	Collier ...	Aylburton
12	M ...	41 ...	Coppersmith ...	Hewelsfield
13	M ...	40 ...	Shoemaker ...	Lydney
14	F ...	28 ...	Sempstress ...	Lydney

The last two deaths took place in the Chepstow Union Workhouse.

In addition to these 14 deaths, in which the cause of death is certified to have been Phthisis, there was another, of a man aged 68, a gardener, who was certified to have died from Influenza and Insanity, but who had "partially recovered from Phthisis."

As the sexes are equally divided amongst these 14 persons it is evident that so far as they are concerned, sex has played no part in the increase of Phthisis during the past year.

In regard to age, leaving out the second case, which is evidently exceptional in character, the ages vary from 24 to 51, and average 36. As this fact corresponds with the age at which adult Phthisis usually proves fatal, it throws no particular light upon the problem.

So far as residence is concerned, the cases appear to have been pretty uniformly distributed over different parts of the district, in correspondence with the variations in population

of the different parishes. But it is probable that some of the persons affected came home to die from other localities in which they had been living and in which they may have incurred the infection of the disease. So that, even if any part of the district showed a predominance of cases it would not justify the inference that it was specially liable to the disease.

Lastly, there is the most important influence of all, namely, occupation. Here, too, we get but little more light than in regard to the other conditions of life. The occupation of a collier is generally assumed to lay him open to special risk of consumption ; but only two of the 14 followed this occupation, and one of them had attained the meridian of life before his attack proved fatal.

On the other hand, a farmer and a farm labourer, whose ages exceeded those of the two colliers and whose deaths, curiously, like those of the colliers, occurred immediately after one another, belong to a class which, from their constant exposure in the open air, enjoy a general immunity from consumption.

In the remaining ten cases the occupations are so various that no conclusion can be drawn from them in regard to their effect in predisposing to the disease.

There is one other condition which would probably throw more light on the causation of the disease in these cases than either of the others, and that is the family history. Although I have made and am still making inquiries on this point, I am not at the time of writing in a position to say what information this condition may offer. But, whatever it may be, it is difficult to see how it can offer any explanation of the original problem which invited this inquiry, namely, why there have been so many more cases of Phthisis in the Lydney district during the last four years than there were in the preceding five years. At present this problem must be considered unsolved.

INFECTIOUS ILLNESS NOTIFIED DURING 1908.

Cases notified in District.									Cases notified in each Locality						Removed to Hospital						
DISEASES.	At all Ages		Under 1 year		1 and under 5		5 and under 15		15 and under 25		25 and under 65		65 and over		Lydney	Tidenham	Aylburton	St. Briavels	Tutshill	Hewelsfield	Lydney
Diphtheria ..	3	0	2	1	0	0	0	0	1	0	2	0	0	0	0	0	0	0	0	0	0
Erysipelas ..	7	0	0	0	0	0	5	2	2	0	2	2	0	1	0	0	0	0	0	0	0
Scarlet Fever..	27	1	8	12	5	1	0	0	21	5	0	0	1	0	0	0	0	0	0	0	7
Puerperal Fever	1	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Totals ..	38	1	10	13	5	7	2	0	25	5	4	2	1	1	0	0	0	0	0	0	7

The above list of cases of notifiable infectious illness is one of the lowest that I have had to record since the formation of the district, and is in pleasant contrast to those of the previous three years. The epidemic of Diphtheria in Lydney and its neighbourhood, which had risen from 15 cases in 1904 to 126 in 1905 has during the two following years been dying out and is now practically extinct, the last flicker of it exhibiting itself in a single case in the parish of Lydney, and two in Aylburton. All three cases were of a mild type.

None of the other notifications call for any notice.

ISOLATION HOSPITAL.—During the course of the year seven cases were removed to the Isolation Hospital at Alvington, all of them cases of Scarlet Fever, which it was thought desirable to isolate, but 20 cases of the same disease were treated in their own homes, with generally satisfactory results.

Subjoined is the statement of expenditure incurred in the maintenance of the hospital for the year ending March 31st, 1909, that being the latest date to which the accounts have been made up. For this statement I am indebted to

MR. G. J. ELLIOTT, the Sanitary Inspector for the district, who acts as Superintendent of the Hospital.

						£	s.	d.
Food	...	...	...	...	...	18	15	6
Fuel and Light	...	...	...	...	...	21	3	10
Ambulance Work	...	...	...	...	...	1	18	0
Disinfectants	...	...	...	...	...	4	7	5
Utensils	...	...	...	...	...	3	1	11
Hauling	...	...	...	...	...	1	2	6
Sundries	...	...	...	...	...	10	2	2
Wages	...	...	...	...	...	78	10	0
Superintendent	...	...	...	...	...	5	0	0
						£144	1	4

During the course of the twelve months in which this expenditure was incurred five patients were nursed in the hospital, during a total of 176 days. There were three members of the staff, who were maintained for 168 days and a washerwoman for 20 days. On this basis the cost of food alone works out at just one shilling per head per day. The item of sundries includes £3 3s. allowance for nurses uniform and £3 2s. for paint and utensils. The item of "Hauling" covers chiefly the hauling of fuel to the hospital. Coal costs 20s. per ton *plus* hauling.

During the course of the year the Council have completed the purchase of the site on which the hospital is placed, by which a very desirable object has been accomplished.

QUARANTINE OF VESSELS.—Some correspondence has taken place during the course of the year between the Local Government Board and the District Council, which has been supplemented by personal interviews between the Surveyor of Customs at Gloucester and myself, as to the provision of means for quarantining any vessel bound for Lydney which may be found to have a case of Cholera, Plague or Small-pox on board. At present there is no place where a vessel so infected could be anchored for the purpose of quarantining

her. The work of sanitary inspection of all vessels entering the Bristol Channel is in the hands of the Bristol Port Authority, which, however, only undertakes to act in this matter in its own interests and in those of the Port of Gloucester, the Authority of which has an arrangement with the Bristol Authority for doing this work on their behalf.

As only one case of Small-pox has been introduced into the Port of Lydney during the last 36 years at least, and as the vessels which enter the port are almost entirely confined to coasters from South Wales and the opposite coast of Gloucestershire and Somersetshire which are not very likely to introduce Small-pox except when it happens to be epidemic and which, so far as Plague and Cholera are concerned, would have undergone inspection before they reached Lydney, the District Council contend that there is no justification for their incurring serious expenditure to meet a very remote risk. They have, therefore, contented themselves with instructing their Sanitary Inspector, MR. ELLIOTT, to inspect every boat on its arrival at Lydney Dock, so far as it is practicable for him to do so, for the purpose of ascertaining whether there is a case of suspicious illness on board, and, in that case, to telegraph to me to come down and visit it, steps being taken in the meantime to quarantine temporarily the suspected person. In the event of my being satisfied that the case is one of serious infection action would be taken to remove the infected person to the Isolation Hospital at Alvington and to disinfect the vessel and to quarantine, if necessary, any persons who might have been in contact with the infected person.

If the risk of the importation of either of these three infections were likely to be frequent it cannot be said that this arrangement would be a satisfactory one. But in view of the facts that the chance of a case of Plague or

Cholera escaping inspection by the Bristol Port Health Authority is infinitesimal and that, as stated above, a case of Small-pox would only be likely to find its way into the Port when that disease was known to be prevalent in the neighbourhood of Lydney, and that we have, in vaccination, such an effective means of arresting its spread, it may be said that the proposed arrangement is sufficient to meet the necessities of the case for the present.

At any rate it is now in operation, and MR. ELLIOTT informs me that he has visited and inspected 36 boats coming into Lydney during the time that has elapsed since the Medical Inspector of the Local Government Board held an inquiry on the subject in the Lydney Town Hall on April 23rd to the end of the year.

SEWERAGE AND WATER SUPPLY.—Further extensions of the Lydney sewers have taken place during the past year to the extent of 475 yards, and the water mains have also been extended for 121 yards. During the same period 47 new connections have been made with the mains. So that good progress is being made in these matters.

The scheme for the supply of water to the Nether End of Woolaston parish has been frequently under the consideration of both the District and the Parish Councils, and much negotiation has taken place on the subject, which appears likely to lead, ere long, to the adoption of a scheme which will provide the supply that has been so urgently waited for many years past.

Some deficiency has arisen in the supply of water to the village of Alvington, which is derived from a source provided by COL. MARLING. As this deficiency seriously affects the Isolation Hospital, which is at present dependent entirely on the village supply, the Council have considered the possibility of supplying the hospital from an independent source, but no definite action has been taken in the matter as yet.

PUBLIC HEALTH ACTS AMENDMENT ACT.—The Council have had under their consideration the adoption of portions of this Act, and have applied to the Local Government Board for permission to do so, but as in the case of the Chipping Sodbury Council, have not as yet received it.

GENERAL ROUTINE OF INSPECTION.—MR. G. J. ELLIOTT, the Sanitary Inspector and Surveyor for the district, has presented to the Council the following summary of the work done during the year :—

ROUTINE WORK OF INSPECTION

HOUSE ACCOMMODATION :

Existing houses cleansed under Section 46 Public Health Act, 1875	...	...	...	0
" " closed under Section 32 Housing of Working Classes Acts	...	...	...	0
" " placed in habitable repair	...	...	...	2
" " overcrowded, dealt with	...	...	...	1
New " water certificates granted	...	...	...	9
" " plans for, under byc-laws, approved...	...	...	...	19

DRAINAGE :

Existing drains cleansed	...	...	...	15
" " repaired or re-constructed	...	...	...	43
Houses connected with sewers	...	...	...	31
Closets connected with water service	...	...	...	12

WATER SUPPLY :

Defective supplies improved	...	...	...	1
New supplies provided—				
(1) By wells...	...	...	...	0
(2) By connection with water mains	...	...	...	47
No. of wells closed	...	...	...	0
„ samples taken for examination	...	...	...	0

EXCREMENT DISPOSAL :

Existing closets closed after notice	...	...	...	4
„ „ repaired or re-constructed	...	...	...	8
Notices to empty privy vaults served...	...	...	...	15
New earth closets, pail closets or improved privies provided	...	...	...	17

GENERAL NUISANCES :

Pig nuisances reported	6
Offensive refuse removed	11
„ ditches cleansed	0

INFECTIOUS DISEASES :

Cases visited and reported on	38
Houses cleansed and disinfected	27

PURVEYANCE OF FOOD :

Dairies, cowsheds and milkshops registered and inspected	22
Slaughter-houses ditto	6
Bakehouses ditto	20
Seizures of unsound food	0

FACORIES AND WORKSHOPS ACT :

Factories registered and inspected	4
Workshops and workplaces inspected	28
Residences of outworkers inspected	0
No. of above employing young persons	0

ELEMENTARY SCHOOLS :

No. in district	11
No. of insanitary conditions dealt with	1
Nature of water supply and whether satisfactory or not	Good in general.

GENERAL PROCEDURE :

Complaints received	13
Notices served	23
Statutory notices issued	8
Summonses issued	0
Nuisances abated without formal notice	38

There are only two matters in the above summary which call for any notice : one is the considerable reduction in the number on the Register of the sellers of milk from 85 in 1907 to 22 in 1908. On going carefully through the register it was found that a large number of the names on it were those of persons who had ceased to sell milk, or who though doing so as a matter of accommodation to their friends and neighbours who came to them for it, were not on that account required to be registered.

Most of the milk thus sold is consumed in the district, and though the conditions under which it is produced are showing evidence of improvement there is still room in some cases for a good deal more.

The other matter is the increase in the number of workshops brought under inspection. Most of these are of a character which does not call for more than formal visitation, and their general sanitary condition is satisfactory.

Altogether the summary represents a large amount of work conscientiously done, in addition to other duties, less distinctly those of a Sanitary Inspector, which MR. ELLIOTT undertakes for the District Council.

FRANCIS T. BOND, M.D.,

Medical Officer of Health.

EAST DEAN & UNITED PARISHES RURAL DISTRICT COUNCIL.

Composition of District: Parishes of Littledean, Flaxley, Abinghall, Mitcheldean, Blaisdon, Minsterworth, Churcham, Bulley, Huntley, Longhope and Ruardean; and the *Township* of East Dean.

Chairman of Council: G. ROWLINSON, Esq.

Surveyor: Mr. W. WHITEHOUSE, Cinderford.

Sanitary Inspector: Mr. F. RICKETTS, Cinderford.

GENERAL STATISTICS.

		1891	1901	Increase	Decrease
Area in Acres	...	...27053	...28626	...	—...
Inhabited Houses	...	... 4203	... 4305	... 102...	—
Total Tenements	...	... 4296	... 4355	... 59...	—
Ditto of less than 5 rooms	...	... 1877	... 2172	... 295...	—
Total Population	...	...20401	...20011	...	—... 390
Males	...	...10522	...10166	...	—... —
Females	...	... 9879	... 9845	...	—... —
Average No. of persons per house	...	...	4·8...	4·6...	—... 0·2

This district, which was created by the Public Health Act of 1872, was extended in 1894 by the transference to it from the Ross Rural district, of the Parish of Ruardean, including Lydbrook, which had a population in 1891 of 1,284 and of 1,361 in 1881. Allowance has been made for this transference in the above statistics.

At the same time the name of the district was changed from that of Westbury Rural to that of East Dean and United Parishes.

It will be seen from the above table that whilst there was a decrease in the population of the district between 1891 and 1901 of 390, there was an increase of inhabited houses

of 102, and also a decrease in the average number of persons per house from 4·8 to 4·6, thus showing a decided improvement in the general housing accommodation of the district.

COMPARATIVE VITAL STATISTICS FOR 35 YEARS.

BIRTHS—						1908.	Highest No. in 35 years.	Lowest ditto.
Males	..	...	..	...	...	299	409	258
Females	...	..	...	...	...	296	394	252
Total	..	..	...	...	..	595	790	510
Ratio of Births per 1000 of population						30·1	(1902) 45·7	(1876) 18·9
DEATHS—								
Small Pox	...	...	..	...	...	0	9	0
Measles	...	...	..	...	...	2	28	0
Scarlet Fever	...	...	..	...	...	0	68	0
Croup and Diphtheria	...	...	...	...	...	11	14	2
Whooping Cough	...	...	...	...	...	5	26	0
Fever	...	...	...	...	...	0	13	0
Diarrhoea and Dysentery	...	...	...	...	...	2	12	0
Enteritis and Gastritis	...	...	..	...	...	5	0	0
Puerperal Fever	...	..	...	...	...	1	—*	—
Erysipelas	...	...	...	...	...	0	—*	—
Other Septic diseases	...	...	...	...	...	0	0	0
Total Deaths from Zymotic Affections	...	...	...	...	...	26	112	6
Ratio per 1000 of population	...	...	...	...	...	1·31	—	—
Total Deaths from all causes	...	...	...	...	...	278	406	240
Ratio of Deaths per 1000 of population	...	...	...	...	...	14·0	(1875) 25·7	(1898) 11·6
Deaths under 5 years of age	...	...	...	...	...	87	214	54
„ „ 1 year	„	„	„	„	per 1000 births	109	—	—

* In earlier Reports Puerperal Fever and Erysipelas have been grouped together; it would be difficult now to separate their *maxima* and *minima*.

It will be seen from the above table that whilst the birth-rate for the year is of an average character when compared with those of the previous 34 years, the death-rate is a low one, though not so low as the record rate of 1898.

It is also noteworthy that whilst every form of infection has been absent altogether from the district during one or more years, Diphtheria never has been, its most favourable record being represented by a minimum mortality of 2.

DECENNIAL BIRTH AND DEATH RATES.

Year.	Population estimated to middle of Year.	TOTAL DEATHS REGISTERED IN DISTRICT.					
		BIRTHS.		UNDER 1 YEAR.		AT ALL AGES.	
		Number.	Rate.	Number.	Rate per 1000 Births.	Number.	Rate.
1898	... 20121 ...	597	29·6	72	120	250	12·3
1899	... 20081 ...	624	31·7	77	123	332	15·9
1900	... 20041 ...	621	30·9	62	99	275	13·7
1901	... 20011 ...	657	32·8	64	97	270	13·5
1902	... 19972 ...	629	31·5	60	95	285	14·2
1903	... 19933 ...	601	30·1	59	97	281	14·1
1904	... 19894 ...	510	25·6	54	105	289	14·5
1905	... 19855 ...	544	27·4	62	114	305	15·3
1906	.. 19816 ...	548	27·6	44	80	221	11·3
1907	... 19777 ...	522	26·3	61	116	254	12·8
Average	—	—	—	—	—	—	—
1898-1907...	19950 ...	585	29·3	61	104	276	13·7
1908	... 19738 ...	595	30·1	65	109	257	13·0

CORRECTED MORTALITY—

Total deaths in district	...	...	...	...	...	257
Deaths of persons belonging to district in Public Institutions outside it	...	...	...	...	21	
Deaths of non-residents in Public Institutions in District	...	...	...	...	0	
Nett addition	...	...	...	...	...	21
						278
Corrected rate	...	...	...	...	...	14·0
Total deaths in Public Institutions in District	...					2

BIRTHS AND THE BIRTH-RATE.—The total number of births registered in the district during 1908 was 595, giving a birth-rate of 30·1, which compares favourably with the average birth-rate of England and Wales generally for the year (26·5).

These births included 33 illegitimates, or 5·5 per cent.

DEATHS AND THE DEATH-RATE.—The total number of deaths registered during the year was 257, giving a death-rate of 13·0, but when corrected by the necessary additions

and deductions, it is increased to 278, giving a correspondingly increased rate of 14·0, which is a trifle lower than that of England and Wales (14·7).

These 278 deaths include 65 of children under one year of age, giving a death-rate of 109, compared with 121, the average rate for England and Wales.

During the year 16 inquests were held, two of which were on infants, and 5 were on accidents, *viz.* : one from felling a tree, one struck by lightning, one from accidental drowning, one from coal-cutting, and one of a collier's child, three years of age, who was accidentally burned.

There were three uncertified deaths, one an infant, and two adults.

Of the 65 infants who died, 5, or 7·6 per cent., were illegitimate.

The following table shows the causes of

INFANTILE MORTALITY.

		1 week	2 weeks	3 weeks	1 month	2 months	3 months	4 months	5 months	6 months	7 months	8 months	9 months	10 months	11 months	Total
Measles ...	...	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
Whooping Cough ..	..	0	0	0	0	0	2	0	0	0	0	0	0	0	0	2
Diarrhoea ...	...	0	0	0	0	0	0	0	1	0	0	0	0	0	1	2
Enteritis ...	...	1	0	0	0	0	1	0	1	0	0	0	1	0	0	4
Gastritis ..	...	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Premature Birth ...	...	10	0	0	0	0	0	0	0	0	0	0	0	0	0	10
Atrophy ...	...	0	0	0	1	1	0	1	0	0	0	0	0	0	0	3
Tuberculous																
Peritonitis ...	...	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1
Convulsions ..	...	0	2	0	0	1	3	0	1	0	0	0	0	1	0	8
Bronchitis ...	...	1	1	2	4	1	0	0	1	1	0	1	1	0	0	13
Pneumonia ...	...	0	1	0	0	0	0	0	0	2	0	0	0	1	0	4
Other causes ..	..	8	2	0	5	0	0	0	0	0	0	0	1	0	0	16
Total .	..	20	7	2	10	3	7	1	4	1	2	1	3	3	1	65

MORTALITY AT DIFFERENT AGES AND ITS CAUSES.

The following table shows the principal cause of the deaths registered in the district during the year 1908 and the ages at which they occurred :—

DEATHS IN OR BELONGING TO WHOLE
DISTRICT AT SUBJOINED AGES.

DEATHS IN OR BELONGING TO WHOLE DISTRICT AT SUBJOINED AGES.																																		
CAUSES OF DEATHS.	Under 1 year.							65 and upwards																										
	All ages.	1 and under 5.	5 and under 15.	15 and under 25.	25 and under 65.	65 and upwards																												
Measles	2..	1..	1..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	
Whooping Cough																																		
Diphtheria & Mem- branous Croup ..	11..	0..	8..	3..	0..	0..	0..		0..	0..	1..	0..	0..	1..	0..	1..	1..	3..	0..	1..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..
Influenza	6..	0..	0..	0..	4..	2..			0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	1..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..
Diarrhoea	2..	2..	0..	0..	0..	0..	0..		0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	1..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..
Enteritis	4..	4..	0..	0..	0..	0..	0..		0..	0..	0..	0..	0..	0..	0..	0..	1..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..
Gastritis	1..	0..	0..	0..	0..	0..	0..		0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..
Puerperal Fever ..	1..	0..	0..	0..	0..	0..	0..		0..	0..	1..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..
Phthisis	12..	0..	0..	2..	3..	7..	0..		2..	3..	0..	1..	1..	0..	0..	3..	0..	0..	0..	0..	0..	0..	0..	0..	0..	1..	0..	0..	1..	0..	0..	0..	0..	0..
Other tubercular diseases	6..	1..	0..	5..	0..	0..	0..		2..	0..	0..	0..	0..	0..	0..	0..	2..	0..	0..	1..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	1..	0..
Cancer, malignant disease	14..	0..	0..	0..	1..	8..	5..		0..	0..	1..	0..	1..	0..	0..	3..	0..	0..	0..	0..	1..	2..	1..	2..	1..	0..	1..	0..	1..	0..	0..	0..	0..	0..
Bronchitis	23..	13..	1..	0..	0..	4..	5..		2..	1..	0..	1..	0..	0..	2..	7..	1..	2..	2..	0..	1..	0..	1..	2..	0..	0..	0..	0..	0..	0..	0..	0..	0..	1..
Pneumonia	15..	4..	4..	1..	0..	5..	1..		0..	0..	0..	0..	0..	0..	2..	6..	0..	3..	0..	0..	0..	0..	1..	0..	2..	0..	0..	0..	0..	0..	0..	0..	1..	0..
Pleurisy	1..	0..	0..	0..	1..	0..	0..		0..	0..	0..	0..	0..	0..	0..	1..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..
Other diseases of Respiratory Organs	2..	0..	0..	0..	0..	0..	2..		0..	0..	0..	0..	0..	0..	0..	2..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..
Premature Birth ..	9..	9..	0..	0..	0..	0..	0..		1..	0..	0..	0..	0..	0..	1..	4..	1..	0..	0..	1..	0..	0..	1..	0..	0..	1..	0..	0..	0..	0..	0..	0..	0..	0..
Heart disease ..	28..	2..	0..	0..	1..	13..	12..		2..	1..	0..	1..	1..	0..	1..	6..	3..	0..	1..	0..	1..	0..	1..	1..	0..	1..	3..	0..	2..	1..	0..	3..	0..	3..
Accidents	9..	0..	1..	1..	0..	4..	3..		2..	1..	0..	0..	0..	0..	0..	1..	0..	2..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	1..	0..	1..
Tetanus	1..	0..	0..	1..	0..	0..	0..		0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	0..	1..	0..	0..	0..	0..	0..	0..	0..	0..
All other causes ..	126..	26..	4..	3..	5..	25..	63..		7..	5..	10..	6..	2..	3..	0..	5..	32..	4..	7..	2..	2..	1..	3..	1..	5..	0..	8..	0..	5..	1..	0..	17..	0..	
All causes	278..	65..	22..	16..	11..	71..	93..		19..	12..	14..	7..	6..	1..	12..	76..	12..	17..	5..	4..	2..	6..	4..	8..	7..	16..	1..	9..	4..	2..	27..	0..	27..	

It will be seen that Diphtheria and Puerperal Fever are the only two notifiable diseases from which any mortality occurred. The latter cases were notified to the County Medical Officer of Health and calls for no comment.

The deaths from Measles and Whooping Cough, which are so closely related to one another, amount to seven, which is not much above the average of these diseases for non-epidemic years. What the mortality from them amounts to in epidemic years, when one or other of these two diseases sweeps almost like a pestilence through the district, may be estimated from a brief statement of facts culled from the records of the past 35 years, which are appended in a tabular form :—

		Measles		Whooping Cough		Both
1874	...	16	...	8	...	24
1878	...	22	...	1	...	23
1879	...	2	...	26	...	28
1883	...	17	...	6	...	23
1884	...	21	...	6	...	27
1888	...	28	...	0	...	28
1891	...	24	...	8	...	32
1905	...	19	...	10	...	29
TOTAL	...	449	...	65	...	214
Annual average		18.5	...	8.1	...	26.6
1906	...	0	...	1	...	1
1907	...	5	...	0	...	5
1908	...	2	...	5	...	7

It will be seen from the above table that 1891 was the record year of the series, and that in all the years taken together the mortality from Measles was more than double what it was from Whooping Cough. The three last years are added to show what the mortality from these diseases is when they are comparatively quiescent.

It is interesting to compare with the mortality from these two diseases that from Scarlet Fever during a similar period. The following table exhibits the deaths from this latter disease in the Westbury Rural district to 1894 and in the

East Dean and United Parishes Rural district since that date, when, it will be remembered, the population was increased by at least 1,200 persons :—

Year	Deaths	Year	Deaths
1874	18	1890	0
1875	4	1891	2
1876	68	1892	12
1877	18	1893	7
1878	10	1894	3
1879	8	1895	2
1880	11	1896	5
1881	2	1897	0
1882	4	1898	1
1883	19	1899	0
1884	27	1900	0
1885	14	1901	1
1886	7	1902	4
1887	2	1903	2
1888	0	1904	4
1889	0	1905	0
1906		1906	0
1907		1907	1
1908		1908	0
16 years	212 deaths	19 years	44 deaths
Average	13·2	Average	2·3

Taking the two periods of 16 years and 19 years respectively it will be seen that the mortality for Scarlet Fever has been reduced during the latter and longer period, with increased population, especially in the early period of life, by something like 80 per cent. To what is this remarkable amelioration due and why has the period been divided in this apparently arbitrary way? Simply because in 1889 Parliament made the notification of cases of Scarlet Fever compulsory and it became then possible to take active measures, from the date of the first appearance of infection in any person, for isolating the infected person, as far as was practicable, and especially to keep children from the infected family from attending at school.

Consider what a saving this has been to the ratepayers compared with what would be the state of things if Scarlet Fever were allowed to run riot now as it did in the seventies. Why, apart from all considerations of the saving of life,

the saving of money and of the dislocation of the whole educational machinery which would be involved in such epidemics as that of 1876, is enormous.

It will be observed that we still have our recurrent epidemics of the disease, as from 1892 to 1896 and from 1901 to 1904, but they are obviously getting feebler in virulence and we are now passing into a condition of things in which Scarlet Fever may be considered as endemic, cases of a disconnected character cropping up at irregular intervals from time to time in different parts of the district, due to the extreme mildness of the infection rendering it in many cases so trivial in its character, that the infected child suffers no more disturbance in its health than it does from an ordinary cold in the head, is sent to school and cannot be excluded, because it exhibits no obvious evidence of illness.

I believe that the improvement which has taken place in this respect is largely due to the recognition of the fact that the throat and nose are the main source of infection in Scarlet Fever, and to the practice of requiring every child who has a sore throat, even without other overt signs of the disease, to be kept away from school until all signs of it have disappeared.

And it is well to remember that in regard to Scarlet Fever we have no such exact means of determining the existence of the infection as we have in Diphtheria. For the germ of the disease is much more minute, and also more long lived, than that of Diphtheria, so that we have only clinical symptoms on which to form an opinion as to the existence or non-existence of infection in any particular case of Scarlet Fever.

It is well, too, to bear in mind in the comparison above instituted between Scarlet Fever in its present and in its earlier days, that each fatal case of Scarlet Fever, even in its most virulent period, involved probably at least 10 non-fatal cases, who only recovered from the acute attack of the

disease to succumb in later years to attacks of kidney and other disease which were the result of the damaged organs it left behind it. Whereas now, secondary affections from Scarlet Fever are getting comparatively rare.

It may be said if notification has produced such benefits in the case of Scarlet Fever, why not adopt it in the case of Measles and Whooping Cough. Many Sanitary Authorities have done so, but the results have not, on the whole, been considered to justify the expense incurred in doing so, and some of those Authorities who have adopted compulsory notification of these diseases have ceased to practise it.

The reason for this is the difference which exists between the infection of Measles and Whooping Cough, and that of Scarlet Fever and other notifiable diseases. In both of these diseases the infection is most virulent at the earliest stage, so that a great deal of mischief may be done before the disease is recognised. In both of them, also, the period of incubation is a long one, so that, especially in schools, a single case may have infected a large number of fellow scholars without there being any indication of the fact, until a sudden explosion of the disease takes place 12 or 14 days after the children have been infected. Under such circumstances isolation of the infected is impracticable and the only thing to do is to close the schools in which the infection has broken out as promptly as possible and to trust to medical treatment and good nursing as a means of saving life. The fatality of these diseases is mainly amongst children under five years of age and it is entirely upon judicious treatment and careful nursing that the possibility of diminishing this fatality depends. Unfortunately the public, who still retain a wholesome fear of the malignity of Scarlet Fever, cannot be persuaded that Measles and Whooping Cough are not trivial diseases, and until this misconception can be corrected and mothers can be taught that careful nursing is

the first consideration in their treatment, they will continue to be, as they have so long been, the opprobrium of sanitary administration. It is for this reason that I have so long urged the appointment of women health visitors, who, amongst various good work that they could undertake, might be the means of effecting a large saving of life in early childhood by visitation of these diseases and by impressing upon mothers the proper method of dealing with them.

The only other source of mortality in the foregoing table which claims comment is that from Diphtheria. Here the mortality, which is the same as it was in 1907, is so much above the average of the past 35 years as to call for inquiry as to its cause.

The best way of initiating this will be to commence by setting out the facts in regard to the mortality of this disease in each of the 35 years since 1874 in this district, as I have done in the case of Measles, Whooping Cough and Scarlet Fever. This will enable the difference between the last of these diseases and Diphtheria to be better appreciated than could be otherwise done.

The following table gives the facts in this respect :—

Year	Deaths	Year	Deaths
		1890	2
		1891	3
		1892	5
1874	2	1893	3
1875	14	1894	7
1876	2	1895	2
1877	10	1896	0
1878	5	1897	14
1879	5	1898	6
1880	4	1899	8
1881	3	1900	8
1882	4	1901	1
1883	4	1902	8
1884	8	1903	5
1885	5	1904	2
1886	6	1905	2
1887	6	1906	4
1888	5	1907	11
1889	6	1908	11
16 years	89 deaths	19 years	102 deaths
Average	5.5	Average	5.3

The first thing that will be evident on comparing this table with that of Scarlet Fever before given is that there is no such decline of the average since notification was made compulsory as there was in the case of that disease. The average in the 19 years which have succeeded 1889, is practically identical with that of the 16 years which preceded it.

The second fact is that if we take the average mortality of the first 12 years of the whole period, when there was no notification of the disease, it is 5·5, or exactly the same as it is for the whole of the 16 years before notification was enforced, showing, apparently, that the conditions which make for the development of Diphtheria were pretty uniform and that the fatality of the disease was also probably much the same from year to year, except that now and then, as in 1875 and 1877 there was a greater prevalence of the disease, or possibly a greater fatality than usual.

Now, if we compare with the average of the first 12 years of the whole period that of the last 12 we find that instead of giving 5·3, as it is for the whole of the 19 years, it is 6·6, that of the first 7 years of the period being only 3·1.

So that, judging by mortality, which is the most effective criterion we can apply, we have not only not improved our position in East Dean, in regard to Diphtheria, as we have so notably done in the case of Scarlet Fever, but have distinctly retrograded.

How is this to be explained? Here are two infectious diseases, closely resembling one another in the general conditions of their causation; closely related in their pathology; attacking children about the same age and differing only in the fact that whilst we have no generally available means of recognising the existence of the infection in Scarlet Fever, except by clinical symptoms and coarse objective phenomena, we have in the case of Diphtheria the

most exact means of recognising its existence by the microscopie appearance of its actual germ, the so-called Klebs Löffler Bacillus, which can be detected with facility by routine bacteriological appliances and methods. But, whilst we have in East Dean succeeded in reducing the fatality of the one to an inconsiderable minimum we have, apparently, made no impression at all upon the other.

Before attempting to solve this problem it will be well to give the record of the

NOTIFIABLE INFECTIOUS DISEASE IN 1908

Cases Notified in District.									Cases Notified in Special Localities.															Removed to Hospital
DISEASES.	All Ages	Under 1 year	1 and under 5	5 and under 15	15 and under 25	25 and under 65	65 and upwards	Bilson	Cinderford	East Dean	Flaxley	Drybrook	Huntley	Jays Green	Lea Bailey	Littledean	Loughope	Minsterworth	Mitcheldean	Ruardean	Ruspidge	Soudley	Isolation Hospital	
Diphtheria ..	57	0	15	32	3	7	0	0	16	1	2	4	2	0	3	7	1	1	14	3	2	0	1	9
Erysipelas ..	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
Scarlet Fever ..	41	0	12	26	1	2	0	0	24	1	0	0	0	1	0	9	0	0	0	1	5	0	0	3
Enteric Fever ..	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
Puerperal Fever	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
Totals ..	101	0	27	58	4	12	0	1	40	2	2	4	2	1	3	16	2	1	14	4	8	1	1	12

From the above Table it appears that whilst 41 cases of Scarlet Fever were notified without a single death, there were 11 deaths out of 57 cases of Diphtheria notified, giving a fatality of 19·3 per cent. The contrast could scarcely be more striking.

In my Annual Report for 1907 I gave in a tabular form the number of notifications of Diphtheria in each of the 11 Sanitary Districts forming the Combined District during the 11 years from 1897 to 1907 inclusive, together with the number of deaths from that disease in each district and the fatality, or the number of deaths per cent. of the cases for the whole period. The fatality varied from *nil* in the

Tetbury Urban district, for 11 cases notified, to 37·5 in the Awre Urban district for eight cases.

In that table the number of cases notified in the 11 years in the East Dean Rural district greatly exceeded that of any other district, even than that of Chipping Sodbury, though the latter district had an estimated population of 21,985 compared with 19,777 in East Dean. But, whilst the fatality of Diphtheria in the Chipping Sodbury district was 15·3 for the 11 years that of East Dean was only 10·2.

But the significance of the question of fatality will be better appreciated by setting it out in detail for each of the 11 years in the East Dean district together with that of 1908. This I have done in the following table, which I have taken from my Report for 1907, merely adding the fatality for each year, which is not given in that table.

Table showing the Number of Notifications of Cases of Diphtheria in the East Dean Rural district in 1908 and in the 11 previous years, with the Fatality in each year.

Year	Cases notified		Deaths		Fatality
1897	...	60	...	14	23·3
1898	...	16	...	6	3·7
1899	...	55	...	8	14·5
1900	...	45	...	8	17·7
1901	...	11	...	1	9·1
1902	...	137	...	8	5·8
1903	...	140	...	5	3·5
1904	...	37	...	2	5·4
1905	...	11	...	2	18·1
1906	...	86	...	4	4·6
1907	...	75	...	11	14·0
1908	...	57	...	11	19·3

The first thing to strike the eye in the foregoing table is the great variation in the fatality of the cases of Diphtheria notified in different years, varying from a minimum of 3·5, for 140 notifications in 1903 to 23·3 for less than half the notifications in 1897.

The second point is that there seems to be a rough, though by no means a uniform, relation between the prevalence of the disease, as indicated by the number of cases notified, and the fatality, the two years in which the highest number of cases was notified, *viz.*: 1902 with 137, and 1903 with 140, having a fatality of only 5·8 and 3·5 respectively. This relation would seem to be negatived by the fact that in the following year, 1904, when the fatality was still low, 5·4, there were only 37 cases notified. But this fact really helps us to a solution of the problem, as will presently appear.

It will be also seen that though the number of notifications is less in 1908 than in 1907, the fatality is higher, and that whilst it was unusually high in 1897, with an average number of notifications, in the following year the prevalence and the fatality were both suddenly reduced, the latter being almost the lowest of the whole 12 years.

These and other apparent anomalies of the table all seem to point to one explanation, *viz.*: that the type of the disease varies greatly in different years, its virulence being great in one year, *e.g.*, 1897, and then suddenly declining, as it did in 1898. During last year the district appears to have been suffering from a prevalence of a severe type of the disease. For though the prevalence has been diminishing from 86 to 57 cases per annum, the fatality suddenly increased from 4·6 in 1906, to 14·0 in 1907, and last year to 19·3.

How this variation in the virulence of the type of the disease in different years is to be accounted for is not easy to explain. The problem is a complicated one. The fatality may vary from accidental causes, such as from neglect of appropriate treatment in the way of nursing in some cases; from antitoxin not having been used sufficiently early or in sufficiently large doses, or from its not having

been used at all. Then there is the question of whether death took place in the acute stage of the disease, from the mere virulence of the poison, or in a later stage, and even during convalescence, from affection of the heart. These and other points would want more careful working out than I have had time to do, as well as to be confirmed by the experience of a greater number of cases before any certain conclusion could be drawn from them. It is quite possible that the unusual virulence of the type in some years may have been due to special outbreaks in particular schools, into which such a type may have been accidentally introduced by some particular case. For it must always be remembered that there are two factors to be considered in every case of infectious disease, the objective infection, in the shape of the germ, and the subjective reaction of the infected person to the injection. Just as the character of a crop of wheat depends partly on the nature, in regard to vitality, of the seed and partly on the suitability of the soil for the nutrition of the seed.

But, however great may be the interest of these questions from a medical, and however important the answer to them may be from a sanitary point of view, they cannot be discussed here.

But there are some inferences, of a practical character, from the above facts on which it may be well to say a few words.

The first is, that in the interests of the patient as well as of the public, and of the medical attendant, every case that is considered by the medical attendant of a sufficiently clear clinical character to be notifiable as Diphtheria should be at once injected with a sufficient dose of antitoxin and sent to the Isolation Hospital, unless there is ample guarantee of careful nursing at home.

The second is that every case of Diphtheria that is thus notified should be confirmed bacteriologically as speedily as possible.

The third is that no case that has been notified should be sent back to school until the medical attendant has obtained at least two bacteriological confirmations of the absence of the characteristic germ. There can be no doubt that the schools, Sunday as well as day, are the principal media through which the infection of Diphtheria is propagated and unless we can keep it out of them, by excluding all children in whom the germ of the disease has been detected, our prospects of reducing it to the comparative degree of innocuity to which we have brought the infection of Scarlet Fever are very small.

And there is this further difficulty in dealing with Diphtheria, in comparison with Scarlet Fever, that whilst the great majority of the cases of the latter disease are of so mild a character that we need feel little anxiety about their danger to life, the cases that are notified as Diphtheria form a jumble of many that are as little serious in their danger to life as are most of those of Scarlet Fever, and there is a variable percentage in which the type is so virulent, or in which the susceptibility of the patient to the poison of the disease is so marked, as to gravely imperil life from the outset.

These are the cases of what is called "mixed infection," in which the special bacillus of Diphtheria is combined with that of another form of infection which greatly intensifies its virulence. Unfortunately at present our resources for recognising these cases of mixed infection and of dealing with them, involve difficulties, especially in the way of nursing, which, in general practice, are not easily overcome. Hence the great importance of dealing with every case of well-marked Diphtheria promptly and energetically, and that,

in the majority of cases, can only be done in a properly organised hospital.

From what has been thus said it follows that of all the notifiable forms of infection with which we have to deal, Diphtheria is by far the most serious, not only on account of its uncertain fatality, but because when it once obtains a hold amongst the children of a locality it is so difficult to eradicate it. It also follows that the most hopeful means of diminishing the fatality of the disease is in the prompt use of sufficiently large doses of antitoxin to arrest its further development and to diminish the special risk of the mischievous action of the poison on the heart.

In view, especially of these considerations, and also of the fact that so large a proportion of the population is attended through medical clubs, I would strongly urge the District Council to follow the example which has been set by the Chipping Sodbury and Cirencester Rural districts, as well as by the Urban district of Cirencester, in the Combined District, and by many others outside it, of supplying antitoxin for use by every medical practitioner gratuitously. The County Council has provided the means of obtaining gratuitous bacteriological information, so that a medical attendant who is called in to attend a case which he thinks it necessary to notify as a case of Diphtheria, has no reason for not securing an immediate confirmation of his diagnosis, and if the District Council provide him with a gratuitous supply of antitoxin he will have no reason for not using it promptly in every case which he thus notifies. The risk to the patient of his so doing is inconsiderable, and the cost to the community will be saved over and over again in various ways. If the parents of the child object to the use of antitoxin or to the removal of the child to the Isolation Hospital, or if, which I cannot suppose is probable, the medical attendant neglects to avail himself of the resources which will be then

placed at his disposal for recognising the disease and for promptly dealing with it, the responsibility will be at their doors. But until the Council provide antitoxin for gratuitous use in all cases and efficient means of nursing cases of Diphtheria directly they can be removed to the hospital, I am bound to point out to them that the responsibility of effectually dealing with this grave danger, will rest on their shoulders.

ISOLATION HOSPITAL.—I have referred so fully in the General Introduction to these Reports to the steps which the District Council have taken in regard to the purchase of a new site for the Isolation Hospital and the removal of the existing structure to it, that it is not necessary for me to say anything further on the subject here.

Whilst this Report is going through the press the process of removal and re-erection has been completed, and when the necessary painting, etc., of the administrative portion of it is done and some one has been appointed to take charge of it, the building will be ready for the reception of patients.

WATER SUPPLY.—During the course of the past year some very important action has been taken by the Council in regard to the development of the sources from which the water supply of the Cinderford portion of the district is obtained, which is likely eventually to solve the problem with which the Council have been confronted for some years on this subject.

In my last Annual Report I mentioned that a boring had been made in the immediate neighbourhood of the existing source at Greenbottom by which a supply of water had been tapped which appeared to be inexhaustible. The work of sinking a well for the purpose of effectively utilising this source was temporarily arrested in consequence of the inadequacy of the plant for carrying it on. But it has been resumed during the past year.

MR. WHITEHOUSE, the Surveyor for the district, to whom I am indebted for information on this subject, states that the well is now completed and that it yields a large and excellent supply of water. He adds, that except in dry times the original supply at Greenbottom is sufficient for the present number of consumers, and that during the past year the supplies from the public wells in other parts of the East Dean portion of the district have been so good and constant that it has not been necessary to provide any extraordinary means to supply those who depend on them. But it must be remembered that there is a large population on Ruardean Hill and at Drybrook, who are always on the brink of a water famine, and it is, therefore, desirable that the steps which are necessary to make the new supply available for them should be initiated with as little delay as possible.

Constant supplies, MR. WHITEHOUSE states, have been maintained during the year at the Blakeney Hill and Horsepool Bottom Works.

During the course of the year also the Council have taken in hand and completed the work of improving the existing supply of water to the village of Littledean, in consequence of the contractor having failed to carry out his contract; but the additional supply has not yet been made available.

During the year 20 houses have been connected with the Cinderford Water Works, from which 1823 houses are supplied with water, in addition to 17 public buildings and factories, which are supplied by meter.

The average yearly income from the Water Works during the last three years has been £950.

VINEY HILL WATER SUPPLY.—During the latter part of the year serious complaints were made to the District Council of the great need of water in this remote part of their district, the present supply being derived from what was described by the representative of the district as “nothing but holes

in the earth," which were not only contaminated by vegetable and other refuse and by being used by the lower animals as well as by human beings, but which contained so little water that it was necessary to visit them late at night or very early in the morning to obtain any water at all, and even then often without success.

It may be well to explain that Viney Hill is, as its name suggests, an elevated district in the extreme south-west corner of the township of East Dean, just outside the boundary of the Awre Urban district and forming a point where the Lydney, West Dean and East Dean districts meet. Of the houses in this district about 30 are within the East Dean boundary. The Council of West Dean have been taking steps to supply their portion of the population by sinking wells, but it is asserted that no supply can be obtained on the East Dean side by this means.

The most obvious way of providing water for this district would be by the extension of the supply from Blakeney Hill; but to do this considerable expenditure would have to be incurred, out of all proportion to the population to be supplied, so far as East Dean alone is concerned. If the several Authorities concerned could be got to combine to provide jointly a supply for all the inhabitants of the district, the difficulty would be much lessened, but such a combination is itself no easy task to effect.

The case is an excellent illustration of the trouble involved by the Crown having allowed squatters in the past to build houses where they liked, without any consideration as to whether their inhabitants could live in healthy conditions or not.

SEWERAGE.—The Sewer in Church Road, Cinderford, has been extended, MR. WHITEHOUSE states, for 80 yards, and during the course of the year eleven houses have been

connected with it and with other branches of the system. No other extensions have taken place during the past year, but the Council have provided in their estimate of expenditure on structural works for the present year for a further extension of the Church Road Sewer and for one at Upper Bilson, of nearly a mile in length, which will drain portions of the district that urgently need it.

The public sewers have worked satisfactorily during the year, but complaints have been made occasionally as to offensive emanations from the outfall works at Soudley, caused, apparently, by the handling of the sludge. Such emanations are very difficult to avoid, in view especially of the very limited space available for dealing with the sludge and of the nearness of the high road. But there is no evidence that they are prejudicial to the public health, and every effort is made to reduce them to a minimum.

PUBLIC URINAL.—This convenience, situated in the middle of Cinderford High Street, which was commenced in 1907, to replace an old and objectionable one, has been completed during the past year at a cost of £120, and is an important public improvement.

Another requirement which is much needed in Cinderford, a public mortuary, has been under the consideration of the Council during the year, but had to be postponed, like some other equally important work, on purely financial grounds.

MITCHELDEAN DRAINAGE.—This vexed question, which has been under discussion for many years, appeared to be likely to be settled in the early part of the year by the adoption of a scheme which the District Council approved. But the matter was relegated to the Parish Council for their consideration, with the result that a majority decided that Mitcheldean wanted no additional drainage, and nothing further has been done.

INSPECTION OF MILK VENDORS.—At the meeting of the Council in January it was decided after considerable discussion and only by the casting vote of the Chairman, to adopt Regulations under the Cowsheds, Dairies and Milk Shops Orders for the control of the sale of milk throughout the district, but no further action has been taken in the matter, the Council having informed the Local Government Board, in reply to inquiries on the subject, that they are waiting to see the Milk Bill which the President of the Board has undertaken to introduce into Parliament, a forecast of which, whether authoritative or not, I cannot say, has considerably unsettled the minds of other District Councils besides that of East Dean.

In a report by MR. RICKETTS, the Sanitary Inspector for the district, on this subject of cowsheds, he states that “during the latter part of the year 1907 and the beginning of 1908 a great effort was made to get these places put in proper order and thereby to bring them up to a fair standard as regards construction, drainage, etc. Owing to the reluctancy of the keepers of these places to move in this direction a number of defaulters were reported to the Council at the December meeting of 1907, when instructions were given to serve notices on the persons in question, but after consulting with the Clerk this course was not resorted to, owing to the fact that no regulations had been adopted and to there being some doubt about getting a conviction if it were afterwards found necessary to issue summonses for failing to comply with the notices.”

GENERAL SUMMARY OF WORK OF ROUTINE INSPECTION.

The following details of the work of routine inspection carried on during the past year have been supplied to me by MR. WHITEHOUSE, the Surveyor, and MR. F. RICKETTS, the Sanitary Inspector to the District Council :—

HOUSE ACCOMMODATION :

Houses cleansed under Section 48 Public Health Act, 1875	...	...	...	...	...	0
„ closed under Section 32 Housing Working Classes Acts	...	...	...	...	...	1
„ placed in habitable repair	...	...	...	...	...	1
„ demolished	...	...	...	...	...	0
Cases of overcrowding dealt with	...	...	...	...	...	3
Water certificates granted for new houses	...	...	...	...	...	13
New houses, plans for, approved	...	...	...	...	...	17

DRAINAGE :

Existing drains cleansed	...	...	...	...	...	0
„ „ repaired or reconstructed	...	...	...	...	...	41
Houses connected with sewers	...	...	...	...	...	11
Roof spouting repaired	...	...	...	...	...	5

WATER SUPPLY :

Defective supplies improved	...	...	...	...	...	0
New supplies provided—						
By connection with water mains	...	...	...	...	...	20

EXCREMENT DISPOSAL :

Existing privies closed after notice	...	...	...	...	...	25
„ repaired or reconstructed	...	...	...	...	...	3
No. of notices served to empty privy vaults	...	...	...	...	...	19
New earth closets, pail closets, or improved privies or w.c.'s provided	...	...	...	...	...	47

GENERAL NUISANCES :

Pig nuisances abated	...	...	...	...	...	6
Offensive refuse removed	...	...	...	...	...	1
„ ditches cleansed	...	...	...	...	...	1

INFECTIOUS DISEASE :

Cases visited and reported on	...	...	...	...	...	101
Houses cleansed and disinfected	...	...	...	...	...	98

PURVEYANCE OF FOOD :

Dairies, cowsheds and milkshops registered	...	...	...	...	...	66
„ „ „ inspections	...	...	...	...	...	40
Slaughter-houses registered	...	...	...	...	...	31
„ „ inspections	...	...	...	...	...	80
Bakehouses registered	...	...	...	...	...	41
„ inspections	...	...	...	...	...	82
Seizures of unsound food	...	...	...	...	...	0

FACTORIES AND WORKSHOPS ACT :

Factories, workshops and workplaces registered and inspected	...	...	...	...	...	89
Residences of outworkers	„	...	...	...	...	0
No. of above employing young persons	...	...	...	...	...	17
Insanitary conditions dealt with not included in return of general nuisances	...	...	...	...	...	0

ELEMENTARY SCHOOLS :

No. in district	...	...	...	...	...	17
Insanitary conditions dealt with	...	...	...	...	...	2
Nature of water supply	...	...	...	...	No complaints	

GENERAL PROCEDURE :

No. of complaints received	..	...	...	...	74
" letters <i>re</i> nuisances written	...	...	...	...	330
" notices served	...	...	...	...	46
" convictions obtained	...	...	..	...	2
" summonses issued	...	...	...	...	2
" nuisances abated without formal notice	...	...	...	...	28

In addition to the above matters, MR. WHITEHOUSE reports that plans for additions and alterations in existing houses were also submitted and approved as follows :—

Dwelling-houses...	...	...	...	...	2
Public-houses	...	...	...	...	2
Shops and business premises	...	...	...	...	2

PUBLIC ROADS.—The new road at Joys Green, near Lydbrook, was completed during the year, and is now open for traffic. This completes for the present the work which the Crown undertook some years ago for improving the means of communication throughout the Forest, which was urgently needed and for which the public are greatly indebted to the good offices of SIR STAFFORD HOWARD, the Chief Commissioner of Woods and Forests. But there is still work to be done in this direction which is much wanted for the purpose of facilitating communications through this populous district.

MR. RICKETTS calls attention in his report to the very material improvements which have been effected in the Public Elementary Schools at Mitcheldean and Drybrook. At the latter school the large room has been refloored and an additional class-room built by which the previous overcrowding has been much diminished. At Mitcheldean an entirely new system of drainage has been constructed, the

old drains having been removed and an important improvement thus effected. In regard to house drainage MR. RICKETTS reports that the works carried out during the year fall somewhat short of what has been done in previous years, owing to the time occupied in improving the cowsheds of the district, but that at the close of the year about 30 houses had been either re-drained or were in process of being so.

He adds that during the four-and-a-half years he has held office as Inspector and Sanitary Surveyor for this district 226 houses have been dealt with, in the direction of providing 160 new water closets and 25 new earth closets, besides the repair of 113 others.

As MR. RICKETTS has, at the date when this report is passing through the press, resigned his appointment under the East Dean and United Parishes Rural Council with the view of taking up a similar one under the neighbouring Ross Rural Council, I think it right to put on record my high personal appreciation of the excellent work he has done during his residence at Cinderford and the valuable help which he has on all occasions rendered to me in the execution of my duties. I much regret his departure from the district.

FRANCIS T. BOND, M.D., Lond.,

Medical Officer of Health.

TETBURY

RURAL DISTRICT COUNCIL.

Composition of District : Parishes of Kingscote, Leighterton, Newington Bagpath, Ozleworth, Boxwell, Oldbury, Didmarton, Weston Birt, Beverstone, Cherington, Shipton Moyne, Long Newnton, Ashley, Tetbury Upton and Avening.

Chairman of Council : T. S. CREW, Esq.

Sanitary Inspector : Mr. T. V. H. DAVISON, Tetbury.

GENERAL STATISTICS.

		1891	1901	Decrease	Increase
Area of District—					
Glos.	...	...22586...	26301...	—	...3715
Wilts.	...	... 3271...	3271...	—	...
Whole District		...25857...	29572...	—	...3715
Inhabited Houses—					
Glos.	...	... 887...	855...	32...	—
Wilts.	...	... 82...	77...	5...	—
Whole District		... 969...	932...	37...	—
Total Tenements —					
Glos.	...	... *	865...	*...	—
Wilts.	...		80...	*...	—
Whole District		... 759...	945...	—	186
Ditto of less than 5 rooms—					
Glos.	...	... *	363...	—	—
Wilts.	...	... *	31...	—	—
Whole District		... 378...	394...	—	16
Total Population—					
Glos.	...	... 3983...	3800...	183...	—
Wilts.	...	... 403...	356...	47...	—
Whole District		... 4386...	4156...	230...	—

		1891	1901	Decrease	Increase
Total Males, Glos.	...	1961...	1848...	113...	—
Wilts.	...	152...	161...	—...	9
Whole District	...	2113...	2009...	133...	9
Total Females, Glos.	...	2102...	1952...	150...	—
Wilts.	...	171...	195...	—...	24
Whole District	...	2273...	2147...	150...	24
Average No. of persons per house—					
Glos.	...	4·47...	4·44...	·03...	—
Wilts.	...	4·90...	4·62...	·28...	—
Whole District	...	4·52...	4·46...	·06...	—

* The Census Reports do not enable me to give these figures.

COMPARATIVE VITAL STATISTICS FOR 35 YEARS.

	1908.		Highest No. in 35 years.	Lowest ditto.	Total in 35 years
BIRTHS—	GLOS.	WILTS.	Total.	In Whole District.	
Total	69	7	76(1898)	127	69(1902) —
Ratio of Births per 1000 of population	18·7	21·6	19·0	31·2	16·4 —
DEATHS—					
Small Pox and Chicken Pox	0	0	0	1	0 1
Measles	0	1	1(1900)	4	0 12
Scarlatina	0	0	0(1877)	3	0 3
Croup and Diphtheria	0	0	0	2	0 9
Whooping Cough	0	0	0	3	0 14
Fever	0	0	0	3	0 4
Cholera, Diarrhoea and Dysentery	0	0	0	3	0 —
Enteritis	0	0	0	—	— —
Puerperal Fever	0	0	0	—	—* 1
Erysipelas	0	0	0	—	—* —
Tuberculosis	1	0	1	10	0 140
Total Zymotic Deaths	1	1	2	4	0 —
Ratio per 1000 of population	0·0	28·10	0·2	—	— —
Total Deaths from all causes	27	2	29	72(1897)	29(1908) —
Ratio of Deaths per 1000 of population	7·3	6·1	7·2	17·7	7·2 —
Deaths under 5 years of age	7	0	7	19	7 —
" " 1 year per 1000 births	58	0	58	—	58 —

The foregoing table represents the mortality of a generally healthy Rural district from the more preventible forms of disease during a period of 35 years. It will be seen that the deaths from Scarlet Fever were very few, being only three, of which two occurred in a single family in 1877 and the third in a neighbouring village in the following year. On the other hand Measles and Whooping Cough bulk much more largely. The four cases under the head of "Fever" were unconnected with one another both in time and place. Contrasted with these comparatively small items of mortality the large number of deaths from Tubercular Consumption shows what a heavy toll this disease takes from the inhabitants of even such a healthy district as this and what an effort is called for to reduce it. On looking through the numbers indicating the deaths from this disease in successive years a gradual diminution is distinctly perceptible, though even in comparatively recent years the mortality has occasionally been very high. For instance, in 1900 we find ten deaths, the highest number recorded in any one year, whilst the two immediately preceding years give eight deaths each.

I have not given these statistics with the view of depicting the Tetbury Rural district as being worse in this respect than all the other Rural districts by which it is surrounded. On the contrary, it may, in most parts, be considered a model district, in the character of its cottages, in the absence of overcrowding and in its general freedom from insanitary conditions. And yet, in spite of all these advantages, four deaths, on an average, still take place in it every year from a disease which is eminently preventible. Possibly some of these deaths represent persons who have returned to their homes, from domestic service or other occupations elsewhere, to die there. Information would be difficult to obtain on this point for the past, but now that Phthisis

is to a certain extent a notifiable disease before death occurs and that information as to the genesis of the disease in every case can certainly be obtained without much difficulty immediately after death, we shall be better able to say how far such a district as Tetbury Rural owes its mortality from Phthisis to any inherent conditions of its own, and how far to its being the dumping ground for the pathological waste of other less favoured localities. Though even then the problem will not be so simple as it may appear at first sight, as it is quite possible that the seeds of the disease may have been sown in early life, *e.g.*, by the drinking of tuberculous milk in the Tetbury district, and have lain dormant until they were awakened into activity by favourable conditions for their growth to which the infected persons may have been exposed when far away from their original homes.

The following table contains the record of birth and death-rates for the year 1908 compared with the ten preceding years :—

VITAL STATISTICS.

Year	Population estimated to middle of Year.		BIRTHS.		TOTAL DEATHS REGISTERED IN DISTRICT.			
					UNDER 1 YEAR.		AT ALL AGES.	
			No.	Rate.	No.	Rate per 1000 Births.	No.	Rate.
1898 ...	4226 ...	137 ...	30·0 ...	13 ...	107 ..	62 ...	14·6	
1899 ...	4202 ...	92 ..	21·8 ...	7 ...	86 ...	66 ...	15·6	
1900 ...	4179 ...	101 ...	24·1 ...	9 ...	97 ..	61 ...	14·6	
1901 ...	4156 ...	84 ...	20·2 ...	6 ...	71 ...	39 ...	9·3	
1902 ...	4133 ...	69 ...	16·7 ...	6 ...	87 ...	30 ...	7·2	
1903 ...	4110 ...	77 ...	18·7 ...	7 ...	91 ...	44 ...	10·7	
1904 ...	4092 ...	81 ...	19·8 ...	7 ...	86 ...	39 ...	9·5	
1905 ...	4057 ...	91 ...	22·4 ...	3 ...	46 ...	48 ...	11·7	
1906 ...	4041 ...	90 ...	22·2 ...	9 ...	128 ...	52 ...	12·8	
1907 ...	4018 ...	75 ...	18·6 ...	8 ...	106 ...	48 ...	11·9	
Average	—	—	—	—	—	—	—	—
1898-1907	4122 ...	160 ...	21·1 ...	7 ...	85 ...	49 ...	11·9	
1908 ...	3995 ...	76 ...	19·0 ...	4 ...	58 ...	29 ...	7·2	

CORRECTED MORTALITY

Total deaths in district	...	...	...	...	...	29
Deaths of non-residents in Public Institutions						
in the district	...	...	...	...	1	
Deaths of residents in Public Institutions						
outside the district	...	...	...	...	1	
Nett reduction	...	...	...	...	...	0
						—
						29
Corrected rate	...	...	...	...	...	7.2
Total deaths in Public Institutions in the district	...					4

BIRTHS AND THE BIRTH-RATE.—The birth-rate for the year (19.0) is again below the average for the previous ten years and much below the average for England and Wales generally (26.5).

Of the 76 births one was illegitimate.

DEATHS AND THE DEATH-RATE.—The death-rate for the year is also exceptionally low, and the lowest I have ever recorded for this district, with the exception of 1902, when it was identical. It is the lowest for the year in the Combined District, and is less than half of that of England and Wales (14.7).

There were no uncertified deaths, but one death of an illegitimate infant.

Four inquests were held during the year : one on a child run over by a motor car, one on another, two years of age, who was found dead in a pond, the third on an adult who died from natural causes, and the fourth on an illegitimate child on whom the following verdict was returned, "Died from Marasmus (wasting), but whether from insufficient food or from being unable to assimilate the food it had, it is impossible to say."

MORTALITY AT DIFFERENT AGES AND ITS CAUSES.

DEATHS IN OR BELONGING TO WHOLE DISTRICT
AT SUBJOINED AGES.

CAUSES OF DEATHS.	All ages	Under 1 year.	1 and under 5	5 and under 15	15 and under 25	25 and under 65	65 and upwards	Long Newton	Tetbury Upton	Avening	Shipton Moyne	Rest of District	Public Institutions in district.
Enteritis	0	0	0	0	0	0	0	0	0	0	0	0	0
Phthisis	1	0	0	0	0	1	0	0	1	0	0	0	1
Other tubercular Disease	1	0	0	1	0	0	0	0	0	1	0	0	1
Cancer, malignant disease	4	0	0	0	0	3	1	1	1	1	1	0	0
Bronchitis	2	0	0	0	0	0	2	0	2	0	0	0	0
Pneumonia	3	2	1	0	0	0	0	0	1	2	0	0	0
Other diseases of Respiratory Organs	1	0	0	0	0	1	0	0	0	1	0	0	0
Premature birth ..	1	1	0	0	0	0	0	0	1	0	0	0	0
Heart disease ..	7	0	0	0	1	3	3	0	1	3	0	3	1
Accidents	2	0	1	1	0	0	0	0	1	1	0	0	1
All other causes ..	7	1	1	1	0	1	3	1	1	2	1	2	0
All causes	29	4	3	3	1	9	9	2	9	11	2	5	4

The above table calls for no further comment than has been already made, nor does the following summary of

INFANTILE MORTALITY AND ITS CAUSES.

	2 weeks	1 month	2 months	6 months	9 months	1 year	Total
Measles	0	0	0	0	0	0	0
Enteritis	0	0	0	0	0	0	0
Premature Birth	0	1	0	0	0	0	1
Congenital Defects	0	0	0	0	0	0	0
Marasmus	1	0	0	0	0	0	1
Pneumonia	0	0	1	1	0	0	2
Total	1	1	1	1	0	0	4

Infantile Deaths—Certified 4, Uncertified 0.

Deaths of Legitimate Infants 3, Illegitimate Infants 1.

Births in the year—Legitimate 75, Illegitimate 1.

The following table exhibits the

NOTIFICATIONS OF INFECTIOUS DISEASES

during the year.

	At all ages	Under 1 year	1 and under 5	5 and under 15	15 and under 25	25 and under 65	65 and upwards	Tetbury Upton	Cherington	Northfield	Newington	Shipton Moyne	Removed to Hospital
Scarlet Fever ..	2...	0...	0...	2...	0...	0...	0	1...	1...	0...	0...	0...	0
Diphtheria ...	1...	0...	0...	0...	1...	0...	0	0...	0	1..	0...	0...	0
Erysipelas ...	2...	0...	0...	0...	2...	0..	0	0...	0...	0...	1...	1...	0
Total	5...	0..	0...	2...	3...	0...	0	1..	1...	1...	1...	1...	0

None of the above cases call for any special comment. They were all of a mild type.

GENERAL ROUTINE INSPECTION IN 1908.

MR. T. H. V. DAVISON, the Sanitary Inspector and Surveyor for the Rural as well as for the Urban district of Tetbury, has supplied the following summary of the routine work of inspection for the past year :—

HOUSE ACCOMMODATION :

Houses cleansed under Section 48 Public Health Act, 1875	...	1
Houses placed in habitable repair	...	0
Overcrowded houses dealt with	...	1
New water certificates granted	...	8
New plans under bye-laws, approved	...	1

DRAINAGE :

Existing drains cleansed	...	6
" " repaired or re-constructed	...	4
" " connected to sewers	...	0
Closets connected with water service	...	0

WATER SUPPLY :

Defective supplies improved	...	1
New supplies provided—		
(1) By wells	...	2
(2) By connection with water mains	...	0

EXCREMENT DISPOSAL :

Existing closets repaired or re-constructed	...	...	...	6
No. of notices served to empty privy vaults	...	...	...	2
New earth closets, pail closets or improved privies provided	...	...	...	14

GENERAL NUISANCES :

Pig nuisances reported	...	...	...	...	...	...	0
Offensive refuse removed	...	...	...	...	...	..	1
" ditches cleansed	...	...	...	...	...	...	2

INFECTIOUS DISEASES :

Houses cleansed and disinfected	..	...	..	...	...	5
Cases visited and reported on	...	...	...	...	..	5

PURVEYANCE OF FOOD :

Dairies, Cowsheds and Milkshops registered and inspected	31
Slaughter-houses ditto	1
Bakehouses ditto	4
Seizures of unsound food	0

FACTORIES AND WORKSHOPS ACT :

Factories registered and inspected	...	...	...	...	0	
Workshops and Workplaces "	...	...	...	...	7	
Residences of outworkers "	...	...	..	...	0	
No. of above employing young persons	...	...	...	...	0	
Insanitary conditions dealt with not included in return of general nuisances	...	...	...	...	...	0

ELEMENTARY SCHOOLS :

No. in district	...	...	...	...	..	...	12
No. of insanitary conditions dealt with	...	...	...	...	0		
Nature of water supply, whether satisfactory or not	...	...	Yes				

GENERAL PROCEDURE :

Complaints received	...	...	...	...	...	...	4
Notices served	...	...	...	...	...	...	0
Statutory notices issued	...	...	...	...	...	...	0
Summonses issued	...	...	...	...	...	...	0
Convictions obtained	...	...	...	...	...	...	0
Nuisances abated without formal notice	...	...	...	...	...	...	22

The only item in the above summary that calls for any remark is the comparatively large number of registered milk sellers in this district. A considerable proportion of these carry on the milk business upon a large scale and send their

milk to London. In their case the arrangements for the cleanly supply of milk are generally satisfactory and an additional check will now be placed on all such milk from the fact that the London County Council are empowered to take samples of milk and have it examined in regard to cleanliness and freedom from infective contamination as well as to general quality.

It is the smaller sellers, therefore, on whom inspection requires to be concentrated, as it is amongst them that the least satisfactory provisions for cleanliness are to be found.

The number of water certificates granted may appear large in proportion to the paucity of plans for new houses approved, but they were for houses the plans of which were approved in 1907, of which there was an unusual number.

FRANCIS T. BOND, M.D., Lond.,

Medical Officer of Health.

TETBURY

URBAN DISTRICT COUNCIL.

Composition of District : The Parish of Tetbury.

Chairman of Council : T. S. CREW, Esq.

Sanitary Inspector : Mr. T. A. V. DAVISON, Tetbury.

GENERAL STATISTICS.

		1891		1901		Decrease	Increase
Area of District in Acres	...	105	...	114	...	—	9
Inhabited Houses	...	465	...	454	...	11	—
Total Tenements	...	491	...	464	...	27	—
Ditto of less than 5 rooms	...	219	...	216	...	3	—
Total Population	...	2173	...	1989	...	184	—
Males	...	1024	...	950	...	74	—
Females	...	1149	...	1039	...	110	—
Average No. of persons per house	...	4.6...	...	4.3...	...	0.3...	—

After the passing of the Local Government Act of 1894 a re-arrangement was made of what had been previously a portion of the suburbs of Tetbury, under the name of Tetbury Upton : a considerable number of the houses and inhabitants of the former parish of Tetbury were, with others in the Rural part of Tetbury Upton, incorporated into a civil parish under that name in the Rural district, thus leaving the remainder of the parish and the Urban district of Tetbury conterminous. This arrangement may have had recommendations from the point of view of the Rural Council and as simplifying administrative work, but it seems to be unfortunate in regard to hygienic requirements, as it leaves a district which is best suited for building purposes of any in the immediate vicinity of Tetbury, and in which houses are actually springing up, without any means either of drainage or water supply, except by an extension of those at the service of the town of Tetbury, which are scanty enough for its own requirements. The most reasonable plan would be, as I have more than once pointed out, to extend the area of the town so as to take in all land that is suitable for

building purposes and thereby to facilitate the development of the town, and an increase in its rateable value, of such a nature as would justify borrowing money on it to bring both its drainage and water supply up to date, encourage industries and thus avert its imminent decadence.

Whether as a result of this decadence or of the above "deal," whilst the area of Tetbury Urban increased from 105 to 114 acres, the number of inhabited houses fell off from 465 to 454, and the population from 2,173 to 1,989, between the censuses of 1891 and 1901.

There is an alternative course to the extension of the town. It is to make the whole parish of Tetbury Upton, or, at any rate, a portion of it, a Special Drainage District. But there are objections to this course which make it much less desirable than the other.

It is said that the "Feoffees" of the town possess property, which has already contributed to public improvements; but to what extent it may be further available I am unable to say.

COMPARATIVE VITAL STATISTICS FOR 35 YEARS.

						1908.	Highest No.	Lowest ditto.
BIRTHS—								
Total	...	...	...	...	...	37	(1875) 97	(1891) 28
Ratio of Births per 1000 of population	...	...	...	...	...	20·0	38·7	14·6
DEATHS—								
Small Pox	...	...	...	...	...	0	0	0
Measles	...	...	...	...	...	0	(1900) 10	0
Scarlatina	...	...	...	...	...	0	2	0
Croup and Diphtheria	...	...	...	...	...	0	2	0
Whooping Cough	...	...	...	...	...	0	(1892) 7	0
Fever	...	...	...	...	...	0	(1877) 3	0
Cholera, Diarrhoea and Dysentery	...	...	...	...	...	0	1	0
Enteritis	...	...	...	...	...	1	—	—*
Puerperal Fever	...	...	...	...	...	0	2	0*
Erysipelas	...	...	...	...	...	0	—	—*
Septicæmia	...	...	...	...	...	0	—	—†
Total Deaths from Septic Diseases	...	...	...	...	...	1	8	0
Ratio per 1000 of Population	...	...	...	...	...	0·53	—	—
Total Deaths from all causes	...	...	...	...	...	30	(1891) 62	28
Ratio of Deaths per 1000 of population	...	...	...	...	...	16·1	28·5	11·4
Deaths under 5 years of age	...	...	...	...	...	7	18	3
Deaths under 1 year of age per 1000 births	...	...	...	...	...	135	—	—

* In earlier Reports this disease was grouped with Puerperal Fever.

† Only recorded since 1904.

It will be observed that there is considerable fluctuation in both the birth and death-rates in this district during the past 35 years, which cannot be accounted for by any corresponding fluctuations in the population, but are often to be found in dealing with small numbers and are due to accidental causes.

DECENNIAL BIRTH AND DEATH RATES.

Year.	Population estimated to middle of Year.	BIRTHS.		TOTAL DEATHS REGISTERED IN DISTRICT.			
				UNDER 1 YEAR.		AT ALL AGES.	
				Number.	Rate per 1000 Births.	Number.	Rate.
1898 ...	2044 ...	42 ...	20·5 ...	8 ...	190 ...	43 ...	21·0
1899 ...	2025 ...	45 ...	22·2 ...	4 ...	111 ...	29 ...	14·3
1900 ...	2007 ...	43 ...	21·4 ...	10 ...	232 ...	39 ...	19·4
1901 ...	1989 ...	46 ...	23·1 ...	7 ...	152 ...	34 ...	16·8
1902 ...	1971 ...	57 ...	28·9 ...	6 ...	105 ...	30 ...	15·7
1903 ...	1952 ...	45 ...	23·0 ...	2 ...	44 ...	33 ...	16·9
1904 ...	1934 ...	39 ...	20·1 ...	5 ...	128 ...	33 ...	17·0
1905 ...	1915 ...	46 ...	24·0 ...	2 ...	43 ...	28 ...	14·6
1906 ...	1897 ...	53 ...	27·9 ...	6 ...	113 ...	37 ...	19·5
1907 ...	1879 ...	41 ...	21·8 ...	4 ...	97 ...	38 ...	20·3
Average							
1898-1907	1961 ...	45 ...	23·2 ...	5 ...	121 ...	34 ...	17·5
1908 ...	1859 ...	37 ...	20·0 ...	5 ...	135 ...	28 ...	15·0

CORRECTED MORTALITY—

Total deaths in district ...	...	...	...	...	28
Deaths of non-residents in Public Institutions in district ...	...	...	...	...	1
Deaths of residents in Public Institutions beyond this district ...	...	...	...	...	3
					30
Rate ...	...	...	...	...	16·1
Deaths in Public Institutions in district ...	...	...	...	...	2

BIRTHS AND THE BIRTH-RATE.—The birth-rate for the past year (20·0) is not only below the average for the previous ten years (23·2), but considerably below that for England and Wales generally (26·5), and is in remarkable contrast to that for 1875 (38·7).

Of the 37 births, 3 were illegitimate.

DEATHS AND THE DEATH-RATE.—On the other hand the crude death-rate (15·0) is below the average for the past ten years (17·5), as also is the corrected death-rate (16·1). The average death-rate for England and Wales was 14·7.

There were no uncertified deaths and no deaths of illegitimate children.

Two inquests were held during the year, one on an elderly person who was found dead in her bed, and the other on a middle-aged female who was found dead in her garden.

INFANTILE MORTALITY DURING THE
YEAR 1908.

	Under												
	1 week	1 month	2 months	6 months	9 mths	10 mths	Total						
Premature Birth	0	...	1	...	1	...	0	...	0	...	0	...	2
Convulsions	0	..	0	...	0	...	0	...	1	...	0	...	1
Pneumonia ...	0	...	0	...	0	...	0	...	0	...	1	...	1
Other causes	1	...	0	...	0	...	0	...	0	...	0	...	1
	—		—		—		—		—		—		—
	1	...	1	...	1	...	0	...	1	...	1	...	5

Deaths in the year—Certified 5, Legitimate 5.

Uncertified 0, Illegitimate 0.

Births in the year—Legitimate 34, Illegitimate 3.

Infantile death rate per 1000 births, 135.

The infantile death-rate, as shown by the above table, is high and compares unfavourably with that of England and Wales generally (121), but is to be explained by the small number both of births and infantile deaths, and may, therefore, be regarded as probably accidental in its nature.

The following table shows the record for the year of

MORTALITY AT DIFFERENT AGES AND ITS CAUSES.

CAUSES OF DEATHS.	DEATHS IN OR BELONGING TO WHOLE DISTRICT AT SUBJOINED AGES.										Tebbury	Workhouse
	All ages.	Under 1 year.	1 and under 5.	5 and under 15.	15 and under 25.	25 and under 65.	65 and up- wards.					
Enteritis ...	1	0	1	0	0	0	0	1	0	1	0	
Phthisis ...	2	0	0	0	0	2	0	2	0	2	0	
Other tubercular disease ...	2	0	0	0	1	1	0	2	1			
Cancer ...	1	0	0	0	0	0	1	1	1	1		
Bronchitis	1	0	0	0	0	1	0	1	0	1	0	
Pneumonia	1	1	0	0	0	0	0	0	1	0	0	
Premature Birth	2	2	0	0	0	0	0	0	2	0	0	
Heart disease	4	0	0	0	0	2	2	4	0	0	0	
All other causes	16	2	1	0	0	2	11	16	0	0	0	
All causes	30	5	2	0	1	8	14	30	2			

The deaths in the foregoing table do not call for any particular notice except in regard to those from Phthisis (Consumption) and other tubercular diseases, which, though not absolutely large in number, are larger than they ought to be.

I have thought it worth while to take out the deaths from this form of disease in the Urban district during the last 35 years, and I find that they average just four yearly, but with considerable fluctuations. In two years almost following one another, in the early seventies, there were ten deaths in each year, whilst there have been several years with eight and nine deaths each. This element of fluctuation, which characterises the whole series, is probably due in some degree to climatic variations, the longer and colder winters bringing with them the larger mortalities. But it is painful to think that during the above period nearly 150 persons should have been prematurely snatched away, and probably also incapacitated for active life for some years before they died, by a disease which is so largely preventible as Consumption is.

The causes which make for the development of this disease are so various and are so much dependent on the social habits and necessities of the people that it is not easy to put one's hand on any one as particularly accountable for this deplorable sacrifice of life. But anyone who inspects the poorer and older class of houses in the town can hardly fail to come to the conclusion that if they are not actually charged with the infection of Phthisis they are so defective in many ways as to greatly facilitate the development of a disease which is so largely dependent on insanitary surroundings as Phthisis is.

One of the most urgent grounds, therefore, for frequent visitation of such houses is the need for seeing that they are kept as clean as is practicable and regularly limewashed.

Unfortunately the flooring of many of them is so defective that satisfactory cleanliness is impossible; and being built directly on the earth, with no damp course to keep their walls dry, the atmosphere in them, especially during the colder season of the year, is often very damp and foul. If the residents in them could only be got to accustom themselves to the free inhalation of fresh air their chances of successfully battling with the insidious infection to which they happen to have been exposed would be largely increased. But a dread of fresh air is still a firmly rooted prejudice of such people, for which there is some justification in the difficulty of obtaining it in their stuffy little homes without incurring the risks which draughts unquestionably bring with them.

There are two other forms of infectious disease from which, as it happens, there has been no mortality in Tetbury during the past year. They are Measles and Whooping Cough. During the last 35 years there have been six distinct epidemics of Measles, which have entailed a mortality of 28. In one of them, in 1900, there were no less than ten deaths.

In the same period, also, there have been seven epidemics of Whooping Cough, which have caused a mortality of 21, whilst from Scarlet Fever there have been only three deaths during the same time.

As there are no public resources in Tetbury for isolating any form of infectious disease, the above numbers give a good idea of the relative importance, from a public health point of view, of these three diseases and of their relations to the general mortality of the town. And it must be remembered that the whole amount of the mischief which both Measles and Whooping Cough do to the juvenile population of the town is by no means fully represented by the actual mortality from them in their acute stage, since

they often leave the constitution irreparably shattered and lay the foundations for fatal disease in after life.

NOTIFICATIONS OF INFECTIOUS DISEASE.—Only two notifications were received during the year, both of them of Scarlet Fever, of a mild type, which did not spread.

DRAINAGE AND WATER SUPPLY.—No works of construction of any importance have been carried out by the Council during the past year.

The Surveyor to the Council, MR. DAVISON, has given a good deal of attention to the re-arrangement of the outfall works and no complaints have been received of any nuisance from them either in the way of offensive smells or of contamination of Lord Estcourt's lake, from which the water supply of Estcourt House and some of the neighbouring villages is derived.

The water supply of the town has been maintained with some difficulty at times, but whether that is due to insufficient pumping power or to a decrease in the underground storage of water from which the supply is pumped is not clear. There is some evidence that, notwithstanding the satisfactory rainfall of the past year, the underground water supply of this portion of the Cotswold plateau is not so abundant as it has been in previous years.

GENERAL ROUTINE WORK OF INSPECTION.—MR. T. V. H. DAVISON, the Sanitary Inspector and Surveyor for the district, has supplied the following summary of the ordinary routine work of the past year :—

HOUSE ACCOMMODATION :

Existing houses cleansed under Section 46 Public Health Act, 1875	...	...	...	0
" closed under Section 32 Housing of Working Classes Acts	...	...	...	0
" placed in habitable repair	...	...	...	3
" overcrowded, dealt with	...	...	...	0
" demolished	...	...	...	3
New houses, water certificates granted	...	...	...	0
" plans for, under bye-laws, approved	...	...	...	0
Chapel, new plans for, approved	...	...	...	1

DRAINAGE :

Existing drains cleansed	...	...	...	...	10
" " repaired or re-constructed	...	...	...	...	4
Houses connected with sewers	...	...	...	...	1

WATER SUPPLY :

Defective supplies improved	...	...	...	...	0
New supplies provided—					
By wells	...	...	...	...	0
Closets connected with water service	...	...	...	...	4

EXCREMENT DISPOSAL :

Existing closets closed after notice	...	...	...	...	0
" repaired or re-constructed	...	...	...	...	1
Notices to empty privy vaults served	...	...	...	...	0
New earth closets, pail closets or improved privies provided	..	...	...	...	0

GENERAL NUISANCES :

Pig nuisances reported	...	...	...	...	0
Offensive refuse removed	...	...	...	...	0
„ ditches cleansed	...	...	...	...	1

INFECTIOUS DISEASE :

Infectious cases visited and reported on	...	..	...	...	3
Infected houses cleansed and disinfected	...	...	...	...	3

PURVEYANCE OF FOOD :

Dairies, cowsheds and milkshops registered & inspected	...	...	...	...	3
Slaughter-houses registered and inspected	...	...	...	...	2
Bakelhouses	„	„	...	...	5
Seizures of unsound food	...	...	...	...	0

FACORIES AND WORKSHOPS ACT :

Factories registered and inspected	...	...	...	...	2
Workshops and Workplaces inspected	...	...	...	...	3
Residences of outworkers	„	...	...	...	0
No. of above employing young persons	...	...	...	...	0
Insanitary conditions dealt with not included in return of general nuisances	...	...	...	...	0

ELEMENTARY SCHOOLS :

No. in district	...	...	...	...	1
No. of insanitary conditions dealt with	...	...	...	...	0
Water supply—Satisfactory.					

GENERAL PROCEDURE :

No. of complaints received	...	...	...	...	8
„ notices served	...	...	...	...	0
„ statutory notices issued	...	...	...	...	0
„ nuisances abated without formal notice	...	...	...	...	18
„ summonses issued	...	...	...	...	0

The foregoing summary calls for no special comment beyond the remark previously made of the need for frequent visitation of the less habitable houses in the town and the enforcement of limewashing and general cleanliness in all cases in which there is an opening for so doing. The situation of the town, with its wide and picturesque streets and elevated position, offers, generally, as favourable conditions for health as any in the county, and in all respects except those to which I have above drawn attention, the general sanitary condition of the town and the health of its inhabitants is very satisfactory. Unfortunately the rateable value of the town is comparatively very small and the Council are seriously handicapped in their efforts to improve it by this restriction.

FRANCIS T. BOND, M.D., Lond.,
Medical Officer of Health.

AWRE URBAN DISTRICT COUNCIL.

Composition of District: The Parish of Awre, including the villages of Blakeney and Awre.

Chairman of Council: F. C. EBBORN, Esq.

Sanitary Inspector: Mr. JAS. BENNETT, Blakeney.

GENERAL STATISTICS.

			1891		1901		Increase		Decrease
Area in acres	...	...	4329	...	4329	...	—	...	—
Inhabited Houses	...	...	259	...	258	...	—	...	1
Total Tenements	...	...	260	...	255	...	—	...	5
Ditto of less than 5 rooms	...	...	67	...	110	...	—	...	—
Total Population	...	...	1148	...	1096	...	—	...	52
Males	...	...	560	...	524	...	—	...	36
Females	...	...	588	...	572	...	—	...	16
Average No. of persons per house	...	...	4.43	...	4.25	...	—	...	0.18

Estimated Population in 1908, 1050.

Average per house, 4.1.

No alteration has taken place in the area of the district since the census of 1901.

The district is mainly a rural one, but its western end borders on Blakeney Hill and Viney Hill, portions of the East Dean district which are occupied by a colliery population, many of the children from which attend school in Blakeney.

The southern side of the district borders on the Severn, and there fishing is the principal occupation.

The village of Blakeney is the administrative centre of the district and is stated in Kelly's Directory to have had a population of 909 in 1891. It is probably much about the same at the present time.

Two of the three schools in the district are situated at Blakeney.

A singular fact revealed by the above comparison of the census details of 1891 and 1901 is the increase of tenements

with less than five rooms. Although there is only a diminution of two in the total number of tenements during the above decennial period the census of 1901 shows an increase of 43 of the smallest and least comfortable class of tenements. To make this contrast clear I give the relative numbers of tenements with one, two, three and four rooms respectively in the two censuses :—

				1891	1901
Tenements of 1 Room	...	...	...	4	1
„ 2 Rooms	...	...	...	8	12
„ 3 Rooms	...	...	...	21	27
„ 4 Rooms	...	...	...	35	70
Total				67	110

It will be seen that though there has been an increase in all but the single room tenements it has been greatest in those with only four rooms. The discrepancy is the more inexplicable from the facts that, according to the returns supplied to me annually by the Sanitary Surveyor for the district, only three new houses were built in the ten years ending with and inclusive of 1901, whilst only one house appears to have been closed during that period ; nor can I find any evidence of any tenements having been divided in the course of it.

COMPARATIVE VITAL STATISTICS FOR 35 YEARS.

BIRTHS—						Highest No. in 35 years	Lowest ditto
Total	...	...	...	...	17	(1877) 44	(1908) 17
Ratio of Births per 1000 of population						16·0	16·0
DEATHS—							
Scarlet Fever	..	...	...	...	0	(1876) 3	0
Whooping Cough	...	...	...	...	0	1	0
Measles	...	...	...	...	0	2	0
Diphtheria	...	...	...	...	0	(1889) 3	0
Diarrhœa	..	...	...	...	0	2	0
Puerperal Fever	...	...	...	...	0	(1877) 1	0
Continued Fever	..	...	...	...	0	(1876) 1	0
Total Zymotic Deaths	...	...	...	...	0	(1876) 6	0
Ratio per 1000 of population						0	0·5
Total Deaths from all causes	...	...	...	...	12	33	6
Ratio of Deaths per 1000 of population						16·0	24·4
Deaths under 5 years of age	...	...	...	...	0	12	0
„ 1 „ per 1000 births	...	...	...	...	0	—*	—*

* I am unable to give the comparative numbers for deaths under 1 year.

During the 36 years that I have been connected with the district, up to Xmas, 1908, there have been no deaths from any form of ordinary infectious disease in 26 of them; there have been in all, four deaths from Scarlet Fever, four from Diphtheria, five from Whooping Cough, three from Measles, one from Continued Fever and eight from Diarrhœa.

DECENNIAL BIRTH AND DEATH RATES.

Year.	Population estimated to middle of year.	BIRTHS.		TOTAL DEATHS REGISTERED IN DISTRICT.			
				UNDER 1 YEAR.		AT ALL AGES.	
		No.	Rate.	No.	Rate per 1000 Births.	No.	Rate
1898	... 1113 ...	28	... 25·1	3	... 107	19	... 17·0
1899	... 1108 ...	26	... 24·3	1	... 38	10	... 9·0
1900	... 1103 ...	26	... 22·5	1	... 38	26	... 24·4
1901	... 1096 ...	25	... 22·8	0	... 0	16	... 14·5
1902	... 1091 ...	20	... 18·3	0	... 0	17	... 15·5
1903	... 1086 ...	29	... 26·7	1	... 34	18	... 16·5
1904	... 1081 ...	22	... 20·3	4	... 181	13	... 12·0
1905	... 1076 ...	21	... 19·5	4	... 190	20	... 18·5
1906	... 1071 ...	24	... 22·4	2	... 83	18	... 16·8
1907	... 1066 ...	17	... 15·9	3	... 176	12	... 11·2
Average	-----	-----	-----	-----	-----	-----	-----
1898-1907.	... 1080 ...	23	... 21·7	2	... 84	16	... 15·5
1908	... 1061 ...	17	... 16·0	0	... 0	10	... 9·4

CORRECTED MORTALITY—

Total deaths in district	...	...	...	...	...	10
Deaths of residents in Public Institutions beyond the district	...	...	...	...	...	2
						12
Corrected rate ...	...	...	...	...	...	11·1

BIRTHS AND THE BIRTH-RATE.—The birth-rate for the past year is almost identical with that for 1907 (16). The falling off in these two years has been remarkable, as the average for the previous eight years was 22·4. Compared with the average birth-rate for the whole of England and Wales during 1908, *viz.*, 26·5, the decline is the more serious.

Of the 17 births, three, or more than 17 per cent., were illegitimate.

DEATHS AND THE DEATH-RATE.—The mortality for the year has also been excessively low, the corrected death-rate being only 11·1 per 1000 of the estimated population, but low as this is it is not a record, for it has twice been lower in the last 35 years : in 1894, when it was 7·9, and in 1886, when it fell to 5·0. It is a noteworthy fact, not only that there was no death under five years of age, but that of the total number of 12 deaths only three were under 65 years of age.

There were no uncertified deaths and no inquests during the year.

For purposes of comparison it may be mentioned that the average death-rate of England and Wales for the past year was 14·1 per 1000 of the estimated population.

The following table shows the

MORTALITY AT DIFFERENT AGES AND ITS CAUSES IN 1908.

CAUSES OF DEATH.	DEATHS IN OR BELONGING TO WHOLE DISTRICT AT SUBJOINED AGES.									
	All ages	Under 1 year	1 and under 5	5 and under 15	15 and under 25	25 and under 65	65 and upwards	Awre	Blakeney	Other parts
Phthisis ..	1	0	0	0	0	1	0	1	0	0
Bronchitis	1	0	0	0	0	0	1	1	0	0
Pneumonia	2	0	0	0	0	0	2	2	0	0
Heart disease	2	0	0	0	0	2	0	0	0	2
Cancer	1	0	0	0	0	0	1	1	0	0
All other causes...	5	0	0	0	0	0	5	1	2	2
All causes	12	0	0	0	0	3	9	6	2	4

As there was no Infant Mortality during the year I have not thought it necessary to reprint Table V. of the returns required by the Local Government Board.

For the same reason I have not reproduced Table III., as no cases of infectious disease were notified during the year.

In my last Annual Report I felt it necessary to refer at some length to a death from Diphtheria which had occurred at Blakeney during the year, for several reasons, which I need not recapitulate here. Although the district has been free from that or any other notifiable disease during the past year those reasons are, in my opinion, as forcible as they were then. Although the district has been, as the experience of the last 35 years given above shows, very free from actual mortality from serious infectious disease, there is always the risk that an outbreak of one or more cases may occur which may require prompt isolation.

It will, I think, be generally admitted that it is unreasonable to expect a district such as this to provide an isolation hospital on its own account. It is, I believe, equally impracticable for three districts, such as those of Awre, Newnham and Westbury-on-Severn to do so. Even if they could obtain a suitable site that would be convenient for all of them, the cost of maintaining it as it must be maintained if it is to be of any real use for cases of emergency, would be such, especially during years when it might not require to be used, that it would be felt to be an unreasonable charge on the rates of the districts interested and it would be a constant struggle to keep it in a state of efficiency.

On the other hand, the Council of Awre, as well as of the two other districts, have a duty in this matter which they cannot ignore without incurring grave responsibility. The only practicable and sensible way of relieving themselves of it is to see whether they cannot make terms with the Council of East Dean and United Parishes to admit cases into the Isolation Hospital at Greenway from their districts whenever it may be necessary to do so, on equitable terms. If they cannot arrange the matter by mutual agreement then the responsibility of taking action to promote such an arrangement devolves upon the County Council and the

Local Government Board, and the matter has now been sufficiently long under consideration, without anything coming of it, and it is so important in the public interest, that effective action should be taken in it, in one way or another, without further delay.

The only incident of any importance in the sanitary history of this district during the course of the year has been an unfortunate disagreement amongst the members of the Council as to the appointment of an Inspector of Nuisances. Into the merits of this difference I do not feel called upon to enter, further than to say that it is much to be regretted, for the sake of all parties. But as it has now been practically settled by the majority of the Council having decided to appoint their own nominee, in spite of the refusal of the Local Government Board to confirm the appointment and to authorise the payment by the County Council of the usual subsidy, I think it only just to MR. BENNETT, who now holds the appointment, to say that I have received all the assistance from him during the year that I have desired, and that I have no reason to think that the efficiency of the office has suffered in his hands.

He has supplied me with the following return of

ROUTINE INSPECTION FOR THE YEAR.

HOUSE ACCOMMODATION :

Existing houses cleansed under Section 46 Public Health Act, 1875	...	...	...	0
" " closed under Section 32 Housing of Working Classes Acts	...	...	...	0
" " placed in habitable repair	...	...	...	3
" " overcrowded, dealt with	...	...	...	1
New " water certificates granted	...	...	...	0
Common lodging-houses inspected—None in district.				

DRAINAGE :

Existing drains cleansed	...	...	...	...	4
" " repaired	...	...	...	...	1
Houses connected with sewers	...	...	...	...	1

WATER SUPPLY :

Defective-supplies improved	...	...	...	...	0
No. of wells closed	...	...	...	...	0
,, samples taken for examination	...	..			2

EXCREMENT DISPOSAL :

New water closets provided	...	...	...	...	0
Existing closets closed after notice	...	...	...	...	7
,, ,, repaired or re-constructed	...	...	...	...	2
Notices to empty privy vaults served...	...	...	...	...	14
New earth closets, pail closets or improved privies provided	...	...	...	...	2

SCAVENGING :

For what parts of district provided by District Council?	...	...	...	...	...	None
--	-----	-----	-----	-----	-----	------

GENERAL NUISANCES :

Pig nuisances reported	...	...	...	...	...	1
Offensive refuse removed	...	..	...	...	...	0
,, ditches cleansed	...	...	...	...	..	2

INFECTIOUS DISEASES :

Cases visited and reported on	...	...	..	...	...	0
Houses cleansed and disinfected	...	...	...	..	...	0

PURVEYANCE OF FOOD :

Dairies, cowsheds and milkshops registered and inspected	...	...	...	...	...	..	21
Slaughter-houses ditto	...	...	...	...	...	...	2
Bakehouses ditto	...	...	...	..	...	...	2
Seizures of unsound food	..	...	...	...	..	...	0

FACTORIES AND WORKSHOPS ACT :

Factories registered and inspected	...	...	...	...	...	0
Workshops and workplaces inspected	...	...	...	...	...	8
Residences of outworkers inspected	...	...	...	...	...	0
No. of above employing young persons	...	...	...	...	...	3
Insanitary conditions dealt with not included in return of general nuisances	...	...	...	...	...	0

ELEMENTARY SCHOOLS :

No. in district	...	...	...	...	...	...	3
No. of insanitary conditions dealt with	...	...	...	...	...	...	2
Nature of water supply and whether satisfactory or not	...	...	...	...	...	None whatever	

GENERAL PROCEDURE :

Complaints received	...	...	...	...	...	4
Nuisances reported	...	...	...	...	...	7
Notices served	..	...	...	...	...	20
Statutory notices issued	...	...	...	..	..	5
Summonses issued	...	...	...	...	..	1
Convictions obtained	..	...	...	...	...	1
Nuisances abated after formal notice	...	.	...	...	...	19
Nuisances abated without formal notice	...	..	...	...	...	9

The above record compares favourably with any that have been received for this district in previous years. The district is, as I have before indicated, practically a rural one, though it happens, by a mistake made when the original Public Health Act was introduced, to have been, as many others of the same kind are, constituted an urban one. There are only two villages in it, Awre, which is scarcely more than a hamlet, and Blakeney, which is generally clean and very picturesquely situated.

I have felt it right to make these remarks as the Local Government Board thought it necessary to send DR. E. P. MANBY, one of their Medical Inspectors, to inquire into the general sanitary conditions of the Awre district during the course of last year. DR. MANBY'S report, which has been printed, and in regard to which some correspondence has passed between the Local Government Board and the District Council, deals very fully with the sanitary condition and administration of the district, and is summed up in four recommendations as follows :—

(1) The Awre Urban District Council should make arrangements for the proper discharge of the duties of surveyor and inspector of nuisances in their district by a person or persons fully qualified to perform the duties of these posts. Especially should attempts be made to bring about a combination with neighbouring authorities to secure the services of an efficient inspector of nuisances who devotes his whole time to his official duties.

(2) The Council should at once make regulations under Act 13 of the Dairies, Cowsheds and Milkshops Order, 1885, and having made regulations the Council should see that they are enforced throughout the district.

(3) The question of a drainage scheme for Blakeney should receive the early and serious consideration of the District Council.

(4) Generally throughout the district attention should be given to the water supply of houses, to defective well covers and to the systematic inspection of dwellings and other premises.

As I may be supposed to be in some degree responsible for the necessity of specially enforcing these recommendations, I may be allowed to say that I think them admirable—as counsels of perfection. I have done my best to get the Awre Council to see that the course of action involved in recommendations 1 and 2 should be pursued by them, but it is well known to every Medical Officer of Health that their enforcement involves considerations of a very serious character which can only be dealt with by legislation that has been long asked for without effect and in the absence of which it is inexpedient to bark if you cannot bite.

As to the third recommendation that also is, theoretically, an excellent suggestion. But to compel the adoption of a drainage scheme for the village of Blakeney involving as it would, from the nature of the locality, considerable difficulty in dealing with the effluent, would, if it could be enforced, cause such an increase in the rates as would lead to a serious and most undesirable reaction against sanitary improvement generally, especially in the face of the facts that the present drainage system, primitive and illegal as it unquestionably is, has never been, so far as I am aware, a

cause of any complaint, and that in the whole of my experience of Blakeney I have had no reason to trace any serious illness or even appreciable ill-health to it.

As to the water supply of houses in the district, any complaints on the subject that have come to my ears—and it is a subject on which people are very apt to complain without justification—have been dealt with when they have occurred, and they have been exceedingly few. I know of no power by which owners of private wells can be made to provide covers for them, unless it can be shown that they are exposed to serious contamination for want of them and are thus a “nuisance injurious to health.”

I could have wished that DR. MANBY had specially included in his “Recommendations” the provision of means for isolating cases of infectious disease when necessary, to which he has referred in the body of his Report, and which is a much more urgent and practicable measure than the drainage of Blakeney.

FRANCIS T. BOND, M.D., Lond.,

Medical Officer of Health.

NEWNHAM URBAN DISTRICT COUNCIL.

Composition of District: The Town and Parish of Newnham-on-Severn.

Chairman of Council: W. H. KING, Esq.

Sanitary Inspector: Mr. H. FERRIS.

GENERAL STATISTICS.

	1891	1901	Decrease
Area of District in Acres ..	1927 ..	1937 ..	—
Inhabited Houses	273 ..	266 ..	7
Total Tenements	275 ..	267 ..	8
Ditto of less than 5 rooms ..	53 ..	36 ..	17
Total Population	1401 ..	1184 ..	217
Males	642 ..	564 ..	78
Females	759 ..	620 ..	139
Average number of persons per house.	5.1 ..	4.4 ..	0.7
Estimated Population in 1908, 1032.			

The above figures show a decrease in all the items of the table in the interval between the censuses of 1891 and 1901.

In 1871 the population of the district was 1483, so that assuming the population of the district to be at present about 1030, there has been a decrease of more than 450 inhabitants, or 30 per cent., within the last 40 years.

The following table shows a comparison of the birth and death rates and mortality from the more serious forms of infectious disease during the greater part of that period.

COMPARATIVE VITAL STATISTICS FOR 35 YEARS.

					1908.	Highest No. in 35 years.	Lowest ditto.
BIRTHS	...	...	...	...	17 (1877)	51	(1874) 15
Ratio of Births per 1000 of population	...	...	...	...	16·4	31·3	9·1
DEATHS—							
Small Pox	...	...	...	...	0	(1874) 5	0
Measles	...	...	...	...	0	2	0
Scarlatina	...	...	...	...	0	1	0
Croup and Diphtheria	...	...	...	...	0	1	0
Whooping Cough	...	...	...	...	0	2	0
Fever	...	...	...	...	0	1	0
Cholera, Diarrhœa and Dysentery	...	...	...	...	0	2	0
Puerperal Fever	...	...	...	...	0	—*	—*
Erysipelas	...	...	...	...	0	—*	—*
Total Deaths from Septic Diseases	...	...	...	...	0 (1874)	5	0
Ratio per 1000 of population	...	...	...	...	0·0	—	—
Total Deaths from all causes...	...	...	...	...	16	(1892) 29	(1898) 10
Ratio of Deaths per 1000 of population	...	...	...	...	15·5	20·5	8
Deaths under 5 years of age	...	...	...	...	2	10	0
Deaths under 1 year of age per 1000 births	...	...	...	...	117	—	—

DECENNIAL BIRTH AND DEATH RATES.

		TOTAL DEATHS REGISTERED IN DISTRICT.									
Year.	Population. estimated to middle of Year.	BIRTHS.				UNDER 1 YEAR.				AT ALL AGES.	
		No.	Rate.	No.	Rate. per 1000 Births.	No.	Rate. per 1000 Births.	No.	Rate.	No.	Rate.
1898	1247	32	25·5	2	62	10	8·6				
1899	1225	30	24·4	4	133	13	10·6				
1900	1203	29	24·1	7	241	21	17·4				
1901	1184	23	19·4	0	0	11	19·2				
1902	1162	31	26·6	4	129	13	11·1				
1903	1140	21	18·4	1	47	11	9·6				
1904	1118	18	16·1	1	55	16	14·3				
1905	1096	19	17·3	2	105	22	19·9				
1906	1084	18	16·6	2	111	16	15·6				
1907	1054	24	22·7	2	83	9	8·5				
Average	—	—	—	—	—	—	—				
1898-1907	1151	24	21·1	2	96	14	13·4				
	—	—	—	—	—	—	—				
1908	1032	17	16·4	2	117	16	15·5				

CORRECTED MORTALITY—

Total deaths in district	...	...	...	...	...	16
Deaths of residents in Public Institutions						
outside district	...	...	...	...	...	0
						—
						16
Corrected rate	...	...	...	...	...	15·5

BIRTHS AND THE BIRTH-RATE.—The above tables show that the birth-rate for the year, 16·4 per thousand of estimated population, is much below the average of the previous 10 years (21·1). But it is not a record, as in 1874 the birth-rate is recorded as having been only 9·1 per cent., the actual mortality having been 15, as against 17 in the past year. But the difference is to be accounted for by the population of the district having been estimated at 1530 in 1874, in consequence of an increase of 158 in the 10 years between 1861 and 1871, whereas it had, in fact, begun to decrease considerably. This decrease was in part due to the action which the Council had taken to deal with overcrowding.

The average birth-rate of England and Wales for the past year was 26·5.

All the births during 1908 were legitimate.

DEATHS AND THE DEATH-RATE.—Whilst the birth-rate was thus exceptionally low the death-rate, which in 1907 was only 8·5, has jumped up to 15·5, which is slightly in excess of the average of England and Wales (14·1). These fluctuations, as I have frequently had occasion to point out, are common in small districts and may be considered as of a purely accidental character unless there is any evidence to the contrary.

That there is no such evidence in this case is shown by the following table which exhibits the

MORTALITY AT DIFFERENT AGES AND ITS CAUSES.

DEATHS IN OR BELONGING TO WHOLE DISTRICT
AT SUBJOINED AGES.

CAUSES OF DEATHS.	All ages.	Under 1 year.	1 and under 5.	5 and under 15.	15 and under 25.	25 and under 65.	65 and up- wards	Town	Other parts of Parish
Phthisis ...	2	0	0	0	1	1	0	1	1
Cancer ...	1	0	0	0	0	1	0	0	1
Premature Birth	1	1	0	0	0	0	0	1	0
Heart Diseases ...	3	0	0	0	1	0	2	3	0
Other Respiratory Diseases ...	1	0	0	0	0	1	0	1	0
Accidents ...	1	0	0	0	0	0	1	1	0
All other causes ...	7	1	0	0	0	3	3	6	1
All causes	16	2	0	0	2	6	6	13	3

It will be seen from the above table that there were no deaths from any notifiable form of disease except Phthisis, from which there were two, the other sources of mortality being of an ordinary character.

The only case of notifiable disease that occurred in the district was one of Scarlet Fever, of a mild type, and the only two infant deaths, both of which were under two weeks, call for no comment. They were both of them legitimate.

The only sanitary matters of any special importance that have occupied the attention of the Council during the year have been the provision of the means of isolating cases of infectious diseases when they require it and of additional burial accommodation.

I have so fully expressed my opinion on the former of these subjects that I need not refer to it further here, except to point out that the reputation of Newnham as a residential town, which is claiming increased attention from the public on the grounds of its various attractions, to which have been recently added an important addition to its educational resources, stands in more need of the means of dealing promptly and effectively with a serious outbreak of infectious disease than such a village as Blakeney does.

And in this connection it is well for me to recall the fact that in 1874 there was an outbreak of Small Pox in the town, in consequence of infection imported from South Wales, in which there were 8 cases, 5 of which were fatal.

I am not able to say what number of unvaccinated children, to say nothing of re-vaccinated adults, there may be in Newnham, but if Small-Pox should find its way into the town it might have very disastrous consequences to its reputation.

For incidents of this kind cannot be hushed up so easily as they could be 35 years ago. The fact of the outbreak would be flashed all over the kingdom, with all the sensational embroidery which the press knows so well how to give it, and if it had to be stated that the cases had to be left in their own houses the credit of all concerned would suffer gravely.

With reference to the subject of burial accommodation, I referred in a recent report to a proposal to provide the increased accommodation which will soon be urgently required, in consequence of the exhaustion of that at present available, by instituting a cemetery on the northern side of the town and at some little distance from it. But I am now glad to state that this object promises to be attained in a much more satisfactory way by an extension of the present Churchyard, which is open to no sanitary objection or to any of a sentimental character, so far as I can see.

GENERAL ROUTINE OF INSPECTION.—MR. H. FERRIS, the Sanitary Inspector and Surveyor for the district, has supplied me with the following summary of work done during the year :—

HOUSE ACCOMMODATION :

Existing houses cleansed, closed or demolished	...	0
" " placed in habitable repair	...	1
New " built or planned	...	0
Cases of overcrowding, dealt with	...	0

DRAINAGE :

Existing drains cleansed	...	...	...	...	11
" repaired or re-constructed	...	...	...	...	9
Closets connected with water service	...	...	...	...	3
Houses connected with sewers	...	...	...	...	1

WATER SUPPLY :

Defective supplies improved	...	...	...	...	0
New supplies provided—					
(1) By wells...	..	...	...	..	0
(2) By connection with water mains	...	...	...	...	5

EXCREMENT DISPOSAL :

Existing closets repaired or re-constructed	...	...	...	...	5
Notices to empty privy vaults ..	...	..	...	...	5

GENERAL NUISANCES :

Pig nuisances reported	...	...	..	...	0
Offensive refuse removed	...	...	...	...	3

INFECTIOUS DISEASE :

Cases visited and reported on	...	...	...	..	1
Houses cleansed and disinfected	...	...	...	...	0

PURVEYANCE OF FOOD :

Dairies, cowsheds and milkshops registered and inspected	...	...	...	...	...	5
Slaughter-houses...	...	...	...	...	...	3
Bakehouses	...	...	...	...	...	3

FACORIES AND WORKSHOPS ACT:

Factories registered and inspected	...	...	...	...	0
Workshops and Workplaces „	...	...	...	...	11
Residences of Outworkers „	...	...	...	...	0
No. of above employing young persons	...	...	...	...	6

ELEMENTARY SCHOOLS :

No. in district	...	...	...	...	...	1
Nature of water supply—satisfactory ; by water mains.						

GENERAL PROCEDURE:

Complaints received	...	...	...	...	...	15
Notices served	...	...	..	...	...	21
Statutory notices issued	.	...	...	...	...	4
Summonses	...	...	...	...	...	0
Nuisances abated without formal notice	...	...	...	...	...	12

The above record calls for no special comment. The matters dealt with in it represent the ordinary routine of a small town, largely composed of houses of the better class, with no liability to overcrowding, a good water supply and effective drainage.

I have, in frequent visits to it, satisfied myself that in regard to other matters its sanitary condition during the past year has, in other respects, been as good as can be reasonably expected.

FRANCIS T. BOND, M.D., Lond.,

Medical Officer of Health.

WESTBURY-ON-SEVERN URBAN DISTRICT COUNCIL.

Composition of District: The Parish of Westbury-on-Severn.

Chairman of Council: M. W. COLCHESTER-WEMYSS, Esq.

Sanitary Inspector and Surveyor: Mr. C. J. CADLE, Chaxhill,
Westbury-on-Severn.

	1891	1901	Decrease
Area of District in Acres ..	8264	8264	—
Inhabited Houses	436	422	14
Total Tenements	443	424	19
Ditto of less than 5 rooms ..	175	140	35
Total Population	2005	1866	139
Males	1019	949	170
Females	986	917	69
Average number of persons per house.	4.6	4.4	0.2

Estimated population in 1908, 1768.

Relation of population to acreage: Three persons to 14 acres.

From the above statistics it will be seen that the two most obvious features of the district, from a sanitary point of view, are large area and small population, to which may be added the fact that it contains the Union Workhouse of the area covered by the four sanitary districts of East Dean and United Parishes and Awre, Newnham-on-Severn and Westbury-on-Severn Urban.

It consists of the small village of Westbury-on-Severn, in which the Workhouse is located, and some six or seven hamlets or titlings.

Of the total population of 1866 at the census in 1901, the Union Workhouse contained 167.

The following table gives the

COMPARATIVE VITAL STATISTICS FOR 35 YEARS.

BIRTHS—						1908.	Highest No. in 35 years.	Lowest ditto
Total	...	...	...	...	...	33	(1880) 83	(1898) 33
Ratio of Births per 1000 of population						18·6	33·2	18·6
DEATHS—								
Small Pox and Chicken Pox	...	...	...	...	...	0	1	0
Measles	..	...	...	...	...	0	3	0
Scarlatina	...	...	...	...	...	0	1	0
Croup and Diphtheria	...	...	...	...	...	0	7	0
Whooping Cough	..	...	...	...	...	0	5	0
Fever	...	...	...	...	...	0	2	0
Cholera, Diarrhoea and Dysentery	...	...	...	...	...	0	5	0
Puerperal Fever	...	...	...	...	...	0	—*	—*
Erysipelas	...	...	...	...	...	0	—*	—*
Total Deaths from Zymotic Diseases	...	...	...	...	...	0	10	0
Ratio per 1000 of population						0·0	—	—
Total Deaths from all causes	...	...	...	...	...	30	(1890) 47	(1904) 22
Ratio of Deaths per 1000 of population						16·9	22·5	11·2
Deaths under 5 years of age						2	16	2
"	"	1	"	per 1000 births		60	—	—

It will be seen from the above table that both the highest and lowest numbers of births, as well as of deaths, have occurred in comparatively recent years, indicating probably the disturbing effect which is exercised on these figures by the fluctuations in the inmates of the Workhouse. Thus, in the past year, of the gross total of 39 deaths, 14 were Workhouse inmates.

So, too, the maximum numbers for Diphtheria and Whooping Cough in past years were due mainly to Workhouse children. And as these children have for some years attended the parish school, it follows that the casual introduction of any infectious disease amongst them is very likely to spread amongst the other children of the parish. It is a noteworthy fact in this connection that Measles have been very little prevalent in Westbury, only 4 deaths from that disease having been recorded in 35 years.

DECENNIAL BIRTH AND DEATH RATES.

Year.	Population estimated to middle of Year.		TOTAL DEATHS REGISTERED IN DISTRICT.											
			BIRTHS.				UNDER 1 YEAR.				AT ALL AGES.			
			Number.		Rate.		Number.		Rate per 1000 Births.		Number.		Rate.	
1898	...	1907	...	51	...	26·7	...	1	...	19	...	37	...	19·1
1899	...	1893	...	43	...	22·7	...	5	...	116	..	32	...	16·9
1900	...	1879	...	52	...	27·6	..	3	...	57	...	19	...	10·0
1901	...	1866	..	45	...	24·1	...	4	...	88	...	23	...	12·1
1902	...	1852	...	48	..	25·9	...	2	...	42	...	32	...	16·9
1903	...	1838	...	49	...	26·6	...	4	...	82	...	23	...	12·5
1904	...	1824	...	47	..	25·0	..	1	...	21	...	22	...	12·0
1905	...	1810	...	36	...	19·8	...	5	...	138	...	34	...	18·2
1906	...	1796	...	45	...	25·0	...	3	...	66	...	42	...	23·3
1907	...	1782	..	50	..	28·0	..	2	...	40	...	43	...	24·1
Average	—		—		—		—		—		—		—	
1898-1907	1844		...	46	...	25·1	...	3	...	66	...	30	...	16·5
1908	...	1768	...	33	..	18·6	...	2	...	60	..	39	...	22·0

CORRECTED MORTALITY—

Total deaths in district	...	...	...	...	...	...	39
Deaths of Non-Residents in District	...	...	..	...	...	...	13
Deaths of persons belonging to Public Institutions outside it	...	...	...	...	...	...	4
Nett reductions	...	...	...	...	...	...	9
							30
Corrected Rate...	...	...	...	...	...	...	16·9
Total deaths in Public Institutions in district	...	...	..	...	...	...	14

BIRTHS AND THE BIRTH-RATE.—The birth-rate for last year (18·6) is the lowest I have recorded, having been only approached by that of 1905 (19·8) and being less by 30 per cent. than the average birth-rate for the year in England and Wales (26·5).

Of the 33 births registered during the year three were illegitimates.

DEATHS AND THE DEATH-RATE.—The corrected death-rate for the year (16·9) though about the average of the district for the previous 10 years, is high when compared

with that of England and Wales (14·7). But this is not due to the prevalence in the district generally of any serious insanitary conditions, as will be seen from the following table of

MORTALITY AT DIFFERENT AGES AND ITS CAUSES.

DEATHS IN OR BELONGING TO WHOLE DISTRICT
AT SUBJOINED AGES

CAUSES OF DEATHS.	All ages.	Under 1 year.	1 and under 5	5 and under 15	15 and under 25	25 and under 65	65 and upwards	Westbury	Elton	Rest of District	Deaths in Public Institutions
Diphtheria ..	1 ..	0 ..	0 ..	1 ..	0 ..	0 ..	0	0 ..	0 ..	1 ..	0
Influenza ..	1 ..	0 ..	0 ..	0 ..	0 ..	1 ..	0	0 ..	0 ..	1 ..	0
Phthisis ..	3 ..	0 ..	0 ..	0 ..	1 ..	2 ..	0	1 ..	2 ..	0 ..	0
Other tubercular diseases ..	1 ..	1 ..	0 ..	0 ..	0 ..	0 ..	0	1 ..	0 ..	0 ..	0
Cancer, malignant disease ..	1 ..	0 ..	0 ..	0 ..	0 ..	1 ..	0	0 ..	0 ..	1 ..	1
Pneumonia ..	1 ..	0 ..	0 ..	0 ..	0 ..	1 ..	0	0 ..	0 ..	1 ..	1
Heart Disease ..	4 ..	0 ..	0 ..	0 ..	0 ..	4 ..	0	3 ..	0 ..	1 ..	2
Premature Birth ..	1 ..	1 ..	0 ..	0 ..	0 ..	0 ..	0	0 ..	0 ..	1 ..	0
Suicides ..	1 ..	0 ..	0 ..	0 ..	0 ..	1 ..	0	0 ..	0 ..	1 ..	0
Tetanus ..	0 ..	0 ..	0 ..	0 ..	0 ..	0 ..	0	0 ..	0 ..	0 ..	1
All other causes	16 ..	0 ..	0 ..	0 ..	0 ..	6 ..	10	11 ..	1 ..	4 ..	9
All causes ..	30 ..	2 ..	0 ..	1 ..	1 ..	16 ..	10	16 ..	3 ..	11 ..	14

The Infant Mortality was limited to 2 deaths, 1 of 11 months, from Tuberculosis and the other, of 5 weeks, from Premature Birth. Both children were legitimate. Two deaths took place from drowning in the River Severn, one of which was a suicide.

The most unusual death was that of a boy of 11 years of age, the son of an inmate of the Workhouse, who died from Tetanus, commonly called "Locked Jaw," caused by a scratch incurred in a quarrel with another Workhouse lad.

The district shares with those of Newnham and Awre the inability to provide any means of promptly isolating cases of infectious disease, but, as a matter of fact, cases of a serious nature occurring in the Workhouse have been occasionally dealt with by sending them to the

Isolation Hospital at Greenway, though there is not, so far as I am aware, any formal agreement between the Guardians and the District Council of East Dean and United Parishes on the subject. Indeed, as I have intimated in the introduction to the Reports, there has been room for doubt as to whom the Greenway Hospital belonged. But as that appears to be now removed it would be well that there should be a definite arrangement between the Guardians and the Westbury Urban Council on the one side and the Council of East Dean United Parishes on the other.

No works of any importance have been carried out by the Council during the year.

The water supply of the district, which is derived from wells, is generally sufficient and not exposed to any special sources of contamination.

The following table gives the cases of infectious disease notified during the past year :—

Cases Notified in District.								Cases Notified in each Locality.						Removed to Hospital
DISEASES.	All Ages	Under 1 year	1 and under 5	5 and under 15	15 and under 25	25 and under 65	65 and upwards	Westbury	Workhouse	Elton	Broad oak	Walmore Common	Northwood Green	
Diphtheria ...	5	0	2	2	0	1	0	1	1	0	0	2	1	1
Scarlet Fever ...	2	0	0	1	1	0	0	0	0	1	1	0	0	0
Erysipelas ...	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals ...	7	0	2	3	1	1	0	1	1	1	1	2	1	1

Of the 5 cases of Diphtheria notified, one was fatal, that of a boy 11 years of age, one of a family of 8 persons, none of whom apparently incurred the infection. One of the other 4 cases was a child in the Workhouse, who was removed to the Greenway Hospital in East Dean. Two

others were children in a family of 9 persons in a totally different part of the parish, and the fifth was an adult lady who, from her position, would come into contact with the children of the village school.

All of these cases occurred in the month of October, except the Workhouse case, which was somewhat earlier. But I have little doubt that the infection originated with this or some other Workhouse child, who had it in a mild form, and that it spread thence to the other persons who came within range of it. Fortunately the steps which were taken to prevent it developing further were successful, and the spread of the outbreak was thus arrested.

The two cases of Scarlet Fever were not of a serious character, though they caused a good deal of trouble and involved expense considerably out of proportion to the danger from them, in an effort to isolate them in an empty cottage that happened to be available at the time. The season was favourable for the experiment, but some amount of furniture, crockery and other appliances had to be provided in much haste, the disposal of which led to some discussion when the experiment came to an end.

GENERAL ROUTINE OF INSPECTION.—MR. J. C. CADLE, the Sanitary Inspector and Surveyor of Buildings and Highways for the district, has furnished me with the following summary of the routine work of the year.

HOUSE ACCOMMODATION :

Existing houses cleansed under Section 46, Public				
	Health Act, 1875	...	...	0
„	„ placed in habitable repair	...	...	1
„	„ overcrowded, dealt with	...	...	2
New	„ water certificates granted	...	...	0
„	„ plans for, under bye-laws, approved	...	...	0

DRAINAGE :

Existing drains cleansed...	...	...	...	1
„ „ repaired or re-constructed	...	...	...	0

WATER SUPPLY :

Defective supplies improved	..	..	...	1
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EXCREMENT DISPOSAL :

Existing closets cleansed	...	...	...	...	3
„ „ repaired or reconstructed	...	...	...	...	1
Notices to empty privy vaults served	...	...	...	...	3
New closets provided	...	...	...	...	1

GENERAL NUISANCES :

Pig nuisances reported	...	...	...	...	1
Offensive refuse removed	...	...	...	...	1
Offensive ditches cleansed	...	...	...	...	5

INFECTIOUS DISEASES :

Infections cases visited and reported on	...	...	...	...	7
Infected houses cleansed or disinfected	...	...	...	...	6

PURVEYANCE OF FOOD :

Dairies, cowsheds and milkshops registered	...	...	...	...	15
Bakehouses	...	...	...	...	0

FACTORIES AND WORKSHOPS ACT :

Factories registered and inspected	...	...	...	...	1
Workshops & Workplaces „	...	...	...	...	5
Residences of outworkers	...	...	...	...	0
No. of above employing “ Young Persons ”	...	...	...	...	0

ELEMENTARY SCHOOLS :

No. in district	...	...	...	...	2
Insanitary conditions dealt with	...	...	...	...	0
Nature of water supply	...	...	...	...	Satisfactory

GENERAL :

Nuisances reported	...	...	...	...	15
Notices served	...	...	...	...	10
Statutory notices issued	...	...	...	...	5
Nuisances abated after formal notice	...	...	...	...	15

The above summary represents the usual routine of a purely rural and sparsely inhabited district, which, if it did not contain the Union Workhouse in its centre, would present even less matter for comment than it does at present.

FRANCIS T. BOND, M.D. Lond.,

Medical Officer of Health.

CORRIGENDA.

The following corrections are required in consequence of the Tables having been printed off before the statistics in the body of the Report had been revised.

CHIPPING SODBURY DISTRICT.

Tables 1, 2,			
3 & 4.	Estimated Population	for 23002	read 22006
Table 1	Birth Rate	„ 20.5	„ 21.1
„ 1	Death Rate	„ 11.9	„ 12.4
„ 1	Population, 1901	„ 22104	„ 22009
„ 1	Increase or Decrease	„ 1284	„ 1279
„ 2	Enteritis and Gastritis	„ 0	„ 2
„ 2	All other causes	„ 108	„ 106
„ 4	Total notification per 1000 population	„ 9.3	„ 9.7

CIRENCESTER RURAL DISTRICT

Table 1	Death Rate	„ 13.6	„ 13.1
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CIRENCESTER URBAN DISTRICT

Table 1	Under 5	„ 14	„ 15
	Above „	„ 86	„ 85

GLOUCESTER RURAL DISTRICT

Table 3	Scarlatina occurred in		
	or removed to hospital	„ 0	„ 2
„ 3	„ „ Total	„ 3	„ 5
„ 3	Percentage of cases	„ 0	„ 12.5

TETBURY RURAL

Table 1	Estimated population, Glos.	„ 3671	„ 3672
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TETBURY URBAN

Table 1	House accommodation, 1891	„ 464	„ 465
„ 1	Increase or decrease	„ 10	„ 11

AWRE

Tables 1, 2			
3 & 4	Estimated population	„ 1059	„ 1061
„ 1	Death Rate	„ 11.3	„ 11.1

Table 1 Total for 19395 read 19396 ; for 611 read 612 ; for 91451 read 91449

„ 92129	„ 91151	„ 247	„ 248	„ 913	„ 912
„ 12.5	„ 12.6				

Table 2 Total „ 92124 „ 91151 „ 10 „ 12 „ 545 „ 543

Table 3 Total „ 92124 „ 91151 „ 26 „ 28 „ 61 „ 63

Table 4 Total „ 92124 „ 91151

**APPENDIX. TABLE I.—SHOWING THE GENERAL VI
COMBINED**

Sanitary District.		Area in Statute Acres.	HOUSE ACCOMMODATION.				1891.	1901.	Increase or Decrease.	Average No. of Persons per House (1901).	1891.
<i>Gloucestershire —</i>											
Westbury-on-Severn Union.	{	East Dean and United Parishes R.D.	28626	4263	4305	+ 42	4.64	204			
		Westbury-on-Severn U.D. ...	8264	436	422	— 14	4.42	20			
		Newnham-on-Severn U.D. ...	1937	273	266	— 7	4.45	14			
		Awre U.D.	4329	259	258	— 1	4.25	11			
Cirencester Union.	{	Cirencester R.D....	80991	2979	2931	— 48	4.12	128			
		„ U.D....	5286	1545	1621	+ 76	4.64	75			
		Chipping Sodbury R.D. ...	69736	4707	4888	+181	4.52	208			
		Gloucester R.D.	30669	1807	2062	+255	5.22	90			
		Lydney R.D.	24634	1693	1867	+174	4.63	8			
<i>Gloucestershire and Wilts—</i>											
Tetbury Union.	{	Tetbury U.D.	114	464	454	— 10	4.38	2			
		„ R.D. {Glos.	26301	887	855	— 32	4.44	3			
			{Wilts.	3271	82	77	— 5	4.62			
		„ Whole District ...	29572	969	932	— 37	4.46	4			
		Total	284158	19395	20006	+611	4.7	90			

- (1) Average of England and Wales for 1908 :—Birth-rate, 26.5. Death-rate, 14.7. 1
- (2) The deaths in these columns are the nett mortality after making allowance for persons in their own district in the Union Workhouses of their district or in public
- (3) The numbers in this column have been calculated in each case on the basis of the population of Gloucester Rural District, in which the

STATISTICS OF THE SOUTH-WEST GLOUCESTERSHIRE
DISTRICT FOR 1908.

POPULATION.			BIRTHS (1).		DEATHS (2).					
1901.	Increase or Decrease.	1908 (Estimated) (3)	No.	Rate per 1000 Population.	Under 5 Years.	Above 5 Years.	TOTAL.	Rate per 1000 Population.	Under 1 Year.	Rate per 1000 Births.
0011	-390	19738	595	30.1	87	191	278	14.0	65	109
866	-139	1768	33	18.6	2	28	30	16.9	2	60
184	-217	1032	17	16.4	2	14	16	15.5	2	117
096	- 52	1059	17	16.0	0	12	12	11.3	0	0
084	-793	11528	260	22.5	26	131	157	13.6	21	80
536	+ 15	7546	151	20.0	14	86	100	13.2	11	72
104	+1284	23002	472	20.5	56	218	274	11.9	41	86
779	+1175	11602	226	19.4	29	102	131	11.2	21	92
649	+496	8996	238	26.4	17	86	103	11.4	15	63
989	-184	1859	37	20.0	7	23	30	16.1	5	135
800	-183	3671	69	18.7	7	20	27	7.3	4	58
356	- 47	323	7	21.6	0	2	2	6.1	0	0
156	-230	3994	76	19.0	7	22	29	7.2	4	58
454	+965	92124	2122	23.3	247	913	1160	12.5	187	88

Birth-rate, 121.

in the several districts who did not belong to them and for others dying outside their districts in the Gloucester Urban and Rural Districts, so far as known.

Comparison between the results of the Census in 1891 and 1901 respectively, except in the case of the Gloucester Urban District, which has to be checked by other considerations.

APPENDIX. TABLE II.—A COMPARATIVE STATEMENT OF THE CORRECTED MORTALITY FOR THE YEAR 1908 FROM ALL C

SANITARY DISTRICT			Estimated population 1908.	* At all Ages.	Under 1 year.	1 & under 5.	5 & under 15.	15 & under 25.	25 & under 65.	65 and over.	Small Pox & Chicken Pox.	Scarlatina.	Group and Diphtheria.	Typhus.	Continue Enteric.
Westbury-on-Severn Union.	East Dean Rural ...		19738	278	65	22	16	11	71	93	0	0	11	0	0
	Westbury-on-Severn } Urban		1768	30	2	0	1	1	16	10	0	0	1	0	0
	Newnham ,,		1032	16	2	0	0	2	6	6	0	0	0	0	0
	Awre ,,		1059	12	0	0	0	0	3	9	0	0	0	0	0
Cirencester Union	Cirencester R.		11528	157	21	5	5	6	33	87	0	0	2	0	0
	,, U.		7546	100	11	3	3	3	33	47	0	0	1	0	4
Chipping Sodbury R. ...			23002	274	41	15	10	7	72	129	0	2	2	0	0
Gloucester R. ...			11602	131	21	8	2	4	22	74	0	0	3	0	0
Lydney R., Glos. ...			8996	103	15	2	4	5	36	41	0	0	0	0	0
Tetbury Union.	Tetbury U. ...		1859	30	5	2	0	1	8	14	0	0	0	0	0
	,, R. { Glos.		3671	27	4	3	3	1	8	8	0	0	0	0	0
	,, R. { Wilts		323	2	0	0	0	0	1	1	0	0	0	0	0
Total ...			92124	1160	187	60	44	41	309	519	0	2	20	0	4

* These deaths represent the nett mortality in the several Districts, after allowing it, but belonging to it, in the Gloucester County Asylum, Barnwood Hosp several Union Workhouses.

AT DIFFERENT AGES AND FROM CERTAIN SPECIFIED CAUSES IN THE SOUTH-WEST GLOUCESTERSHIRE COMBINED DISTRICT

Measles.	Whooping Cough.	Diarrhoea and Dysentery.	Enteritis and Gastritis	TOTAL.	Rate per 1000 Population.	Puerperal Fever.	Erysipelas & other Septic Diseases	Total Septic Diseases.	Phthisis.	Other Tubercular Diseases.	Diseases of Respiratory Organs.	Heart Disease.	Accidents and Suicides.	Malignant Disease.	All other Causes.	TOTAL.
2	5	2	5	25	1.27	1	0	1	12	6	41	28	9	14	142	278
0	0	0	0	1	0.5	0	0	0	3	1	1	4	1	1	18	30
0	0	0	0	0	0.0	0	0	0	2	0	1	3	1	1	8	16
0	0	0	0	0	0.0	0	0	0	1	0	3	2	0	1	5	12
2	1	2	1	8	0.69	0	1	1	6	1	16	24	3	16	82	157
1	0	0	1	7	0.92	0	0	0	5	4	10	15	2	12	45	100
2	2	1	0	9	0.39	0	3	3	17	7	49	43	13	25	108	274
0	0	4	1	8	0.68	0	0	0	3	1	27	14	8	13	57	131
0	1	1	1	3	0.33	0	0	0	14	0	15	13	3	1	54	103
0	0	0	1	1	0.53	0	0	0	2	2	2	4	0	1	18	30
0	0	0	0	0	0.0	0	0	0	1	1	6	7	2	3	7	27
0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	1	1	2
7	9	10	10	62	0.67	1	4	5	66	23	171	157	42	89	545	1160

ctions for deaths in each District of persons not belonging to it and for deaths outside the Insane, and in the Gloucester Children's Hospital and Infirmary, as well as in the

TABLE III.—NEW CASES OF NOTIFIABLE SICKNESS COM-
THE YEAR 1908 IN THE SOUTH-WEST GLOUCESTERSHIRE
AGES, DISEASES, DISTRICTS, &c.

SANITARY DISTRICT.			Estimated Population in 1908.	CASES.	DISEASES.				
				At all Ages.	Scarlatina.	Group and Diphtheria.	Enteric or Typhoid Fever.	Puerperal Fever.	Erysipelas.
Westbury-on Severn Union.	East Dean & United Parishes	19738	101	41	57	1	1	1	
	R. District Council	...							
	Westbury-on-Severn	1768	7	2	5	...	...	...	
	U. District Council	...							
Cirencester Union.	Newham	1032	1	1	0	...	...	0	
	Awre	1059	0	...	0	...	...	...	
	Cirencester R.	11528	44	28	10	3	...	3	
	U.	7546	35	7	14	12	...	2	
Chipping Sodbury R.		23002	70	42	18	4	0	6	
Gloucester R.		11602	67	16	39	6	0	6	
Lydney R. ..		8996	38	27	3	...	1	7	
Tetbury Union.	Tetbury U. ...	1859	2	2	...	...	...	0	
	R. ...	Glos.	3671	5	2	1	0	...	2
		Wilts	323	0	0	...	...	...	...
Totals ...		92124	370	168	147	26	2	27	

* No Isolation Hospital is

TO THE KNOWLEDGE OF THE MEDICAL OFFICER OF HEALTH DURING
COMBINED DISTRICT, CLASSIFIED ACCORDING TO
ITALISATION AND FATALITY.

OCCURRED IN OR REMOVED TO HOSPITAL.				Total.	PERCENTAGE OF CASES.				Deaths in Hospital.	Deaths out of Hospital.
Diphtheria.	Enteric Fever	Erysipelas	Puerperal Fever		Removed to Hospital		Fatality in all.			
					Scarlet Fever	Diph- theria.	Scarlet Fever	Diph- theria.		
9	0	...	0	12	7·3	15·8	0·0	19·2	Dip. 2	S.F. 0 Dip 9
1	0	...	0	1*	0·0	20·0	0·0	20·0	0	1
...	0	...	0	0*	0·0	0·0	0·0	0·0	0	0
0	0	...	0	0*	0·0	0·0	0·0	0·0	0	Dip. 0
5	0	...	0	13	2·8	50·0	0·0	20·0	Dip. 1	Dip. 1
5	7	0	0	17	71·4	35·7	0·0	7·1	Dip. 1	0
2	3	...	0	8	7·1	11·1	4·7	11·1	Dip. 1	S.F. 2 Dip. 1
3	0	0	0	3	0·0	7·7	0·0	7·7	0	S.F. 0 Dip. 3
...	0	...	0	7	26·0	0·0	0·0	0·0	0	S.F. 0
...	0	...	0	0*	0·0	0·0	0·0	0·0	0	0
...	0	...	0	0*	0·0	0·0	0·0	0·0	0	0
...	0	...	0	0*	0·0	0·0	0·0	0·0	0	0
25	10	0	0	61	15·4	17·0	1·2	13·6	Dip. 5	S.F. 2 Dip 15 17

le in these districts.

TABLE IV., SHOWING THE NUMBER OF NOTIFICATIONS OF CASES
PREVIOUS YEARS, WITH THE RELATIVE

SANITARY DISTRICT				Estimated Population in 1905	1908		1907		1906		1905		19
					Notifications	Deaths	Notifications	Deaths	Notifications	Deaths	Notifications	Deaths	Notifications
Westbury-on-Severn Union	{	East Dean & United Parishes R. District Council	19738	57	11	75	11	86	4	11	2	37	
		Westbury-on-Severn U. District Council	1768	5	1	—	—	3	0	1	1	3	
		Newnham " "	1032	—	—	1	0	—	—	—	—	4	
		Awre " "	1059	—	—	4	1	—	—	—	—	—	
Cirencester Union	{	Cirencester R. ...	11528	10	2	14	0	33	—	8	1	14	
		" U. ...	7546	14	1	13	1	4	2	6	1	3	
Chipping Sodbury R. ...			23002	18	2	44	5	43	7	*	*	5	
Gloucester R. ...			11602	39	3	12	1	6	1	5	0	2	
Lydney R. ...			8996	3	0	17	1	77	1	126	8	15	
Tetbury Union	{	Tetbury U. ...	1859	—	—	—	—	11	0	—	—	—	
		" R. ...	Glos.	3671	1	0	—	—	7	1	1	0	—
			Wilts.	323	—	—	—	—	—	—	—	—	—
Totals ...			92124	147	20	180	20	270	16	158	13	83	
Fatality per cent. ...			.	—	13·5	—	11·1	—	6·0	—	8·2	—	

* There are no returns for 1904.

IPHTHERIA IN THE COMBINED DISTRICT IN 1908 AND IN THE 10
 TOWNSHIP PORTIONS OF THE DISTRICT.

1903		1902		1901		1900		1899		1898		Total Cases Notified	Total Notifications per 1000 of Population	Total Deaths	Fatality per cent. of cases notified.
Notifications	Deaths	Notifications	Deaths	Notifications	Deaths	Notifications	Deaths	Notifications	Deaths	Notifications	Deaths				
0	5	137	8	11	1	45	8	55	8	16	6	670	33·9	66	9·8
—	—	2	1	—	—	35	4	—	—	5	1	54	30·5	8	14·6
—	—	—	—	—	—	—	—	—	—	—	—	5	4·8	1	20·0
—	—	—	—	—	—	2	0	—	—	2	2	8	7·5	3	37·5
1	0	10	1	4	0	1	0	4	0	5	0	104	9·0	5	4·8
—	—	4	0	5	1	2	0	2	0	4	2	57	7·5	9	15·7
0	1	16	5	5	0	15	2	36	4	22	6	214	9·3	32	14·9
2	0	3	0	19	4	10	0	7	1	25	5	130	11·2	15	11·5
3	1	12	0	4	0	11	1	17	2	1	0	286	32·0	15	5·2
—	—	—	—	—	—	—	—	—	—	—	—	11	5·9	0	0
—	—	1	0	2	1	—	—	1	0	1	0	14	3·8	2	14·3
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
6	7	185	15	50	7	121	15	122	15	81	22	1553	15·5	156	14·8
—	4·4	—	8·1	—	14·0	—	12·4	—	12·3	—	27·1	16·8	Mean	—	Mean

table for this year.

